The American Journal of
CLINICAL MEDICINE
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OCTOBER MCMXVII

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The Habit of Being Constipated

IN HIS interesting article on constipation, among the leading articles of this month's issue, Doctor Rittenhouse justly calls attention to the fact that constipation is, in a large measure, a habit-disease and that its prevention as well as its cure necessitates the forming of correct habits, among others, of emptying the rectum. In his view, the normal state of the rectum is, being empty. When feces have been propelled into it, the supervening sensation is discomfort and calls for expulsive movements, for the sake of removing the contents. If this call of nature is disregarded, however, a habituation develops in time, that makes it possible for the feces to remain in the rectal pouch without giving rise to discomfort or other sensation.

However, among all the good advice that is being offered, in this as well as in other articles on the subject, we miss reference to one point that, it seems, is not without importance, namely, the formation of the habit of constipation in quite small children.

Ordinarily, infants in arms empty their rectum according to the usual physiological demand mentioned by Doctor Rittenhouse; when fecal material has entered the pouch, the resulting sensation of discomfort incites expulsive efforts. It may happen, however, that the physician is consulted about the baby with a history of constipation. Enemas, soap suppositories, and other makeshifts are resorted to—usually persistently—with the result that the little patient has a hygienically vicious habit fastened upon him even in earliest life.

This is wrong. It is acknowledged, generally, that sufficient exercise has a tendency to correct constipation; but, in the case of infants, the necessity of exercise is too frequently overlooked altogether. Exercise? Why, baby is taken out in the baby-carriage every day! But, that is not sufficient; in fact, it won't do at all. The baby needs active exercise; it (beg pardon, she, or he) must actively exercise and stretch his legs and arms and the muscles of the trunk. Every time the diaper is changed, also when the daily sponge or full bath is given, baby should be allowed to lie either quite naked or dressed only in shirt and diaper; that will permit the in-

fant to stretch and to kick; and it is remarkable how the little beggar will take advantage of the liberty of action accorded. Incidentally, the bowels will act better; if this active exercise is persisted in.

Once the infant has been graduated from breast or bottle as the exclusive source of sustenance, after having become a (more or less) "erect biped without feathers," and can toddle around in jumpers, there is more exercise; but, now, the demands of civilization and the usages of polite society are enjoined upon the little unfortunate, with the result that the indiscriminate dejection of the rectal contents is forced to his consciousness as a heinous crime. Baby must tell "Muvver" when he wants the pot. To be sure! But, when baby does so, "Muvver" is busy and tells him to "wait just a minute, there's a dear." Of course, accidents will happen, but, sooner or later scoldings and spankings have their effect and the youngster becomes quite civilized in retaining the rectal load until Mother's convenience is suited. Unfortunately, the retention may be too successful and the habit of constipation is engendered simply because mother does not realize how important it is to pay attention to the promptings of nature.

Doctor, it should not require more than a single serious conversation with the mothers of infants and little children to teach them the necessity of attending to the babies' natural wants speedily, just as soon as they are made known. Also, the advantage of exercise for the infant in arms can readily be impressed upon their consciousness, and much trouble, discomfort, and even serious illness may be prevented in this manner. Surely, it is right to teach the little toddler to request to be put on the vessel, and to discourage his primitive habit of soiling diapers and panties; but, when he indicates his desire, absolutely nothing must be permitted to interfere with a prompt response. In this manner, correct habits of regular bowel evacuations may be formed and fostered.

To be successful in any one field one must use the circumstances of life rather than be used by them.
—"The Trained Nurse."

CHLORAZENE CAN BE ADMINISTERED INTRAVENOUSLY

Can any of our readers tell us of any experiences with Chlorazene used intravenously? We shall greatly appreciate any records of this nature.

Acting upon the suggestion of Dr. W. A. Evans, of this city, Mr. Carl Nielson, with a view to discovering the tolerance of animals for Chlorazene introduced into the body in this manner, made the following experiment.

A small dog weighing about 11 pounds received, in one day, eight injections of between 1-3 and 1-4 grain of Chlorazene each. This is equivalent to a little more than 5 grains per dose for an adult person weighing 150 pounds, or a total daily intravenous dosage, for a man of this weight, of 48 grains in eight hours. After a few days' interval, a second series of experiments was carried out upon the same dog, who in four intravenous injections received the equivalent of 112 grains for a man weighing 150 pounds. The solution was introduced in a strength of 1 percent in the first experiment and of 4 percent in the second.

It was found that these injections causel no pain or symptoms of distress. There was no evidence of any toxic action, the dog remaining cheerful and contented after each injection. The only symptom observed was, a slight drowsiness immediately following the introduction of the Chlorazene solution.

In view of the absence of toxic action in these enormous doses, the possibility of using Chlorazene as a general systemic germicide immediately suggests itself. In one instance that has come to our attention, the Chlorazene was injected into a human patient, without causing any distressing symptoms.

Can anyone give us further information?

THE DISINFECTION OF DRINKING-WATER

One of the most important problems in wartime is, to provide the fighting man, whether a soldier or a sailor, with an ample supply of pure water. The great plagues, such as cholera, typhoid fever, dysentery, are, in the main, transmitted in drinking-water; and, in the wars of the past, these diseases have carried off far more men than did bullet and sword.

It is now military practice to sterilize the soldier's drinking-water either by boiling or by the addition of chlorinated bleaching-powder. The water thus treated

can be supplied to the men in the field in water-carts, provided immobile troops are being dealt with. Unfortunately, however, a supply of safe, potable water not always is available for rapidly moving troops, landing-parties or men doing all kind of special detail work involving frequent change of terrain. To provide for the needs of men of this class, Dr. H. D. Dakin, in association with Dr. E. K. Dunham, of the Herter Laboratory at New York, has devised a water-sterilizing tablet that is effective, stable, easily carried, and imparts no objectionable taste. The substance employed is para-sulphondichloramino-benzoic acid, and to which Doctor Dakin has given the more convenient name of halazone.

Halazone contains about 25 percent of chlorine. In the commercial tablets, it is combined with sodium carbonate or bicarbonate or with borax. Doctor Dakin says that, when these tablets are kept in amber-colored bottles, under ordinary conditions, no decomposition will take place inside of two months. Of course, when exposed to sunlight, in clear glass bottles, decomposition is more likely to occur, but, given reasonable care, the tablets are virtually stable. The chlorine contained in these tablets is given up rapidly when they are dissolved in water. In the concentration in which they are used, the chlorine taste is barely perceptible.

Doctor Dakin has shown that in a concentration of 1:300,000 the halazone will sterilize ordinarily heavily contaminated water—containing, for instance, typhoid or cholera-germs, colon-bacilli and the dysentery-organisms, in about thirty minutes. Halazone is made into tablets containing each approximately 1-16 grain of the chemical. One such tablet is sufficient for sterilizing a quart of drinking-water.

We have been informed that these tablets already are in use in the British navy for coasting-ships, landing-parties, and the like. It is highly probable that they will be introduced into our own navy and the United States army, and it will be plain to every reader of this journal that tablets of this kind are likely to have an almost universal use. While the water supply of our great cities now generally is very good or else easily capable of treatment with calcium hypochlorite, the millions of people living in the country and in small towns nevertheless are mainly dependent upon well-water and this most the time is of very doubtful quality.

We predict that many physicians will find it desirable to recommend to their patrons the use of tablets of this character, so as to be sure of safety. They will be used by traveling salesmen, campers, farmers, hotelkeepers, as well as in hospitals, sanitariums, and industrial establishments, where many people congregate, and where, consequently, the danger of infection always is great. Only last year, several hundred cases of typhoid fever developed, as the result of a contaminated water supply, among the employees of a certain great watch-factory; and instances of this kind are constantly occurring. It certainly will be a godsend to thousands of people to know that they can safeguard their health and be assured of protection by the use of tablets of this kind. Particularly is this true in the case of those traveling in many of the foreign countries, notably China, the Philippines, the Orient, the Spanish Americas, and in the many other countries where water is notoriously unsafe.

Halazone tablets are now being manufactured in America by The Abbott Laboratories, which have placed this and other Dakin products strictly "on the map."

There is only one vital difference between work and play; and that is, the attitude of mind with which you regard it. —Oliver Morosco.

THE PSYCHOLOGY OF RIOTS

Nothing merely happens. For every phenomenon, there is an adequate causation. Moreover, although we may feel disposed to take a pessimistic view of humanity when glancing over the unpaid accounts of our whilom patients, we may safely antagonize the hypothesis of innate and unfathomable depravity. So that, when the news comes of such outbreaks as that recently witnessed in East St. Louis, we may be sure that the law of cause and effect will be found at work there. Without possessing an intimate personal acquaintance with the conditions, we, yet, may reconstruct the situation.

There had been an influx of negroes from the far south. Whatever prompted this movement, we may be sure that it comprised the less desirable classes. The idle, the discontented, the floaters; those who either were not wanted at their former locations or were wanted overmuch—by men

wearing big shining stars on their left breast. These negroes congregate in a northern city, where they are freed from the sense of inferiority to the whites—and, to the illiterate, undeveloped negro, this means that he is as good as the white man; that is, whereas the white man of his late home expected him to give room on the sidewalk, he now can make the white man step off for him. It is altogether natural that such a negro should wish to discover how far this liberty might extend and whether, in truth, there were any limits whatsoever.

Aggressions were inevitable and soon deeds of violence occurred that could not be permitted if whites continued to live in the same vicinity. But, which of the negroes were the guilty ones among so many, all of whom to the whites looked pretty much alike? Besides, the wrongdoers were swallowed up and hidden among the masses of their fellows, who, if not sympathizers, at least screened them and concealed them by silence when the officers of the law appeared. It was not some particular negro living in the Fourth ward who did the deed, but the Fourth-ward negroes. So, when the patience of the aggrieved came to an end, it was the Fourth-ward negroes upon whom fell the consequences.

It is an old story. The Indian greeted his white neighbor in a friendly manner, but, when the latter's back was turned, treacherously tomahawked him. It was not possible to divine which particular Indian was liable to turn traitor on the spur of the moment, and, so, the word grew that "the only good Indian is a dead Indian." Cresap's massacre of Logan's family had its origin in just such conditions.

The pioneer returns to his home, to find wife and children slain and evidence of their having been tortured. He, thereafter, devotes his half-crazed brain to the extermination of the race that perpetrated the wrong—not merely the guilty individuals—and in after years points with pride to the long row of notches on his rifle-stock. So, our soldiers in the Philippines soon learned to watch out for a bolo slash from the little brown brother who greeted them with a vociferous "Amigo."

The law holds a receiver as equally guilty with the thief. Mob-law holds the bystanders, who throng the streets during the riot and allow the perpetrators of violence to bury themselves in the masses of spectators, to be guilty, inasmuch as they made such crimes possible, whereas, had the people kept off the streets, the rioting would not have occurred. It is impossible to put down such a riot without clearing the streets—and then innocent women and children are shot.

We are very far from seeking to justify mob-violence, but, the whole body of East St. Louis negroes must share much of the blame.

To grow old is, to be able to look back; to look back is, to be able to look forward with renewed hope and inspiration. —Annie W. Goodrich, R. N.

THE IMPORTANCE OF BIRTH REGISTRATION

The intensely individualistic attitude that is a characteristic of the American citizen is the natural result of the peculiar evolution of the American nation, which may be said to have passed through the experiences of a thousand years in one-fifth that space of time. The idea that the state exists for the benefit of the individual, and not the individual for the benefit of the state, is evident in the attitude of the American, who considers himself as the most important unit, deferring to his duties to the commonwealth only incidentally—and this with a certain impatience—when he is obliged to restrain his personal inclinations, lest the exercise of his liberty of action encroach upon that of his fellow men.

Strangely enough, it is in the matter of great and important questions of public welfare that as individuals we are prone to let the commonwealth work out its own salvation, ignoring the fact that it is made up of the sum total of citizens and refusing to bear our legitimate share of the burden. The political life of the United States has notoriously been relegated far too much to professional politicians, the individual deeming himself a model citizen if he pays a fair amount of taxes as they are due and if he votes at the polls when it is convenient. Nevertheless, the American demands full protection from the commonwealth and insists upon those benefits that accrue to the citizen of a modern civilized state. Here is a contradiction.

One of the problems forming a vital part of the functioning of national welfare, being indissolubly connected with a great variety of questions, more particularly the

preservation of health and life, consists in the appropriate attention paid to vital statistics, of which one of the most important items is, the registration of deaths and of births.

It is a peculiar fact that, although attention to vital statistics in this country originated, in Massachusetts, almost as long ago as seventy years, it is only since the beginning of the present century that more general attention was paid to this important subject; and even today an unduly large portion of the country is neglectful of this phase of national policies. And it is with truth that the director of the U. S. Census declared, some years ago, that "it certainly is both strange and shameful that the United States should be so far behind the other leading countries of the world in the registration of deaths and even more so in the registration of births." This is true to such an extent that today Japan, the last country to adopt progressive "civilized" methods, is at present fifty years ahead of the United States in regard to an efficient system of registration of vital statistics.

It is a sad reflection upon our boasted pride of country that we have virtually no complete registration of births for even a single state or a single city in the entire United States, and it is an unfortunate reflection that, according to Dr. Cressy L. Wilbur, chief statistician for vital statistics of the U. S. Census Bureau, "probably the most utterly worthless birth registration of any of the large cities of the entire civilized world may be found in Baltimore, Chicago, and New Orleans"; to which he adds: "When we consider the supreme importance of such registration, for the purpose of the study and prevention of infant mortality as well as for that of supplying those legal records which are coming more and more to be in demand through the growing complexity of our society, we may well urge all persons interested in better conditions for human life and increased sanitary efficiency to advocate, *first of all remedial measures*, better vital statistics, which means simply enforcement of good laws for the registration of births and deaths."

At the present time, the necessity of complete birth registration has come to our realization more than ever before. It has always been sensed dimly that complete records of human pedigrees were justified fully as much as in the case of thoroughbred animals; in an academical and impersonal way, it was admitted that births ought to be recorded, because questions might arise, for instance, in law, in the matter of inheritance or the establishing of legal titles to property; of establishing citizenship when trying to procure a passport, and such like; but, practically the essential character of this necessity has been insisted upon only by those who were "in the business," so to speak, and who were charged with the duties of elaborating and maintaining the vital statistics of the country.

At the present time, however, when the government has issued a call for the men between twenty-one and thirty-one years of age, to present themselves for examination, for the purpose of selecting those physically fit to take active part in the defense of their country and of the ideals for which the country stands, as a matter of fact, it is found that the absence of a birth-record may be productive of very serious difficulities and inconvenience. In a circular letter issued last June by the Bureau of the Census, Department of Commerce, attention is called to the fact that never before has the United States government been so deeply interested in knowing the exact ages of the young men of the land; also, in consequence, never before has the public mind been so ready to grasp the great importance of complete birth registration.

When the story is told of an American arrested in London as a German spy, unable to obtain a birth-certificate, because his birth had never been recorded and because the doctor had died, but who finally was saved by the discovery of an old letter which told of his birth, the people grasp the point and agree that births should be registered; still, as this story relates to somebody far away, somebody unknown and probably never heard of before, the point soon is forgotten and, so, no wave of strong public opinion is ever really started. So, too, the statements that birth-records are needed to prove men of voting-age, to establish old-age pensions and pensions for the children of soldiers, to establish rights of inheritance, to determine how efficiently the states are protecting the health of the children, and to de-

termine who is entitled to the protection of OUR FLAG—these statements are too likely to be treated as old axioms, which call for no immediate reform.

And today—this WAR CALL for the registration of our young men brings home the need of birth-records to every community and to almost every family in the country.

It is to be hoped that this call for the registration of all men between the ages of twenty-one and thirty-one will awaken the people from their lethargy and lead to the important forward step in our civilization to register every birth.

This is not properly one of those things that can be shunted off to the other fellow. Wherever a physician or a midwife is in attendance upon a birth, its registration devolves upon each individually. If none such attended, then it becomes the duty of the father (or mother, respectively) to record the birth of the infant. And this is not a purely voluntary act, but is as much the duty of every honest and right-thinking citizen as is the paying of taxes and obedience to the law. By virtue of their calling, physicians are best in a position to realize the necessity of vital statistics, and here, as in so many other matters, it is incumbent upon us to be "doctors"—that is, teachers—bringing home to the people the necessity and, indeed, the advantages and benefits of complete vital statistics, an essential part of which is the exact registration of birth.

A man may be a priest without a tonsure; not all priests are in orders. If we devote ourselves to doing good, we imitate the good priest, we obey God. —Balzac.

THE MORTALITY OF TUBERCULOSIS

The director of the Bureau of Census of the Department of Commerce, informs us that the Bureau of Census is planning to prepare and publish a monograph on the mortality of tuberculosis covering the calendar-year 1918. To make this work of greater value an endeavor is being made to obtain the cooperation of all physicians, to the extent of carefully recording or supervising the statements of occupations upon the death-certificates during that year. Circular-letters to this effect have been sent to all the physicians in the United States, and we heartily endorse this undertaking, in the hope that every physician receiving this circular or who may read this paragraph will comply with the request. The following extracts from the circular-letter will indicate the tenor of its contents.

"More accurate and definite statements of the occupation of decedents should be written upon death-certificates. Until this is done, mortality statistics by occupations will continue to be unsatisfactory.

"The Bureau of the Census is planning for the near future a monograph on tuberculosis. How much more valuable this monograph will be if it is possible to show accurately the occupations of decedents.

"As a physician, you appreciate the importance of such statistics. As a physician, you are by education better qualified than the ordinary informant to understand a proper statement of occupation.

"Will you not, therefore, take pains to see to it that the occupation-items upon each one of your death certificates are properly supplied?

Physicians who have not received the circular-letter referred to and who are willing to cooperate with the Bureau of the Census in this important undertaking should address the Director of the Bureau, Samuel L. Rogers.

It is more important to know what kind of a patient the disease has, than to know what kind of a disease the patient has. —Dr. Albert Abrams.

CALCIUM SULPHIDE AND DICHLORAMINE-T IN INFANTILE PARALYSIS

Doctor Robertson, our health-commissioner, has recently warned the citizens of Chicago to be on the lookout for infantile paralysis. During the late summer, the number of cases has increased. Similar reports are coming in from different parts of the country, so, we recommend the wise doctor to keep his eyes open for suspicious cases and to remember that in its beginnings anterior poliomyelitis is an insidious disease, one not at all easy to recognize. If treatment is to be effective, it must be begun early, and at this stage it yields best results.

We shall not go over the ground of treatment again, as we dwelt upon this subject at considerable length last year; however, we do suggest that every reader look up

Doctor Marner's interesting paper on the treatment of infantile paralysis, which appears among the miscellaneous articles, on page 765.

We wish to emphasize, also, the value of calcium sulphide in this connection. While this is an old remedy, it still remains our favorite. Thorough and early saturation with it, we believe, will contribute much to the successful therapy of the disease, and to preventing it entirely, provided it is given early.

There is one new remedy, however, that we wish to emphasize at this time—a remedy which we believe to be capable of preventing infantile paralysis, provided it is used during the stage of incubation. We mean dichloramine-T.

This antiseptic belongs to the chloramine-group and is the latest of the antiseptics introduced by Doctor Dakin. It contains more than 29 percent of chlorine, and it has been extensively used, especially in England, in the form of oil sprays for the nose and throat, to free carriers of meningococci and diphtheria-germs. The results obtained are fully described by Doctor Dakin in a paper published by him in *The British Medical Journal* for June 30. Its use in general surgery, also, in the form of an oil spray or oil solution, is described in some detail in a paper published subsequently in *The Journal of the American Medical Association.*

The remarkable thing about dichloramine-T is, that in oil it can be used in a concentration of from 20 to 40 times as great as that of the hypochlorite solution, and much stronger than any other germicide with which we are familiar. And the beauty of it is that, so used, it does not cause coagulation of the albumin, do injury to the tissues or exert any toxic effect, so far as we know. The oil acts as a reservoir from which the remedy is given up slowly to the tissues, thereby exerting a more or less continuous bactericidal action. For the nose and throat, it is employed in a 2-percent solution in chlorinated eucalyptol and liquid paraffin.

We believe that dichloramine-T, thus employed, will prove to be one of the most satisfactory remedies ever suggested for the prevention of anterior poliomyelitis. We strongly advise the regular and routine use of this agent in the case of every child exposed to this disease. Prior to its use, the nose and throat should be cleaned out with a weak solution (1:300) of chlorazene.

Please try this method and let us know how it works.

None of us do much that is worth while if the doing of the thing is irksome. If it is a real task and burden to do the thing we have to do, we never do much, and the little we do might just as well be left undone. What society needs is the service that has joy in it, and joy in service comes from skill in service. —Martin G. Brumbaugh.

TREATING THE SICK

It is part of the editorial task to look over the exchanges and glean from their pages every item that may be helpful to any of our many thousands of readers. It is a pleasant task; and many a time we have admired the scintillating wit, the keen discrimination, the brilliant fancy, the erudition and logical deduction of our colleagues. But, all these things may help the struggling doctor only indirectly in his work of relieving human suffering and staying the hand of Death.

After all, what use are we doctors to the world? Our function is fast bound up with that word "treatment," with the practical application of our science. Without this, the science is but a barren and useless thing, a diversion for the idle dilettant, the closet-dreamer.

The march of the profession has been progressive along the path of preventive medicine. Great are our triumphs in this direction, especially since the health-authorities of our municipalities have shown what may be accomplished in the public schools. Again, they are demonstrating the importance of taking disease at its earliest manifestations, and are not waiting for end-results to develop in the form of incurable lesions. But, we can not stop here. What should we say of the dentist whose only remedy for the toothache were, to tell us how we might have avoided it? We must, and will, long continue to find the major part of our work in treating the consequences of sanitary sins, of disobedience to our injunctions. It is this part of our art that lags. We are no better doctors, if as good ones, as our grandfathers, despite their relative ignorance and their crude means and methods.

The art of medicine has for its province the treatment of disease. Students take up the study of medicine for the purpose of learning to treat sick human beings. Yet, in the constantly expanding curricula, we

find about everything else taught, and very little of the one essential. Look over the five ponderous volumes of Osler's newest edition and see whether the criticism is warranted, that said that it teaches everything excepting how to treat the sick. Yet, we should be doing the great teacher an injustice were we not to qualify this by adding that the elucidation of the pathology is so fine that this work is a necessity to every practician of medicine, who desires to progress with the advancing science of medicine.

To return to our contemporaries—we have taken a pile of their magazines and turned over page after page, without finding anything that would aid our readers in their daily work. Many a fine article we see, the gist of which is, to demonstrate how many things may be done with some one method of treatment; or how very skilful some specialist is in the treatment of his line, so skilful that Duty (with a very big capital D) commands us all to send him our patients. Or, there is a learned disquisition on a malady so rare that nobody this side of Helgoland every heard of it before, or, an account of some extra-fine laboratory-work. In short, anything and everything, excepting how the perusing doctor can better aid his own patients, himself.

Oh, yes, we have said this before, not once only, but many times; and we sometimes feel like setting off a dynamite bomb under some of you in order to attract the attention the case deserves. But, no—you'll come to the Postgraduate, and, when a man has gotten ready to show you the latest and most improved methods of treating those diseases that you will encounter in your own practice, you'll pass him by and go off to watch some surgeon extract the gasserian ganglion or do some other stunt that no one would be called upon to repeat in twenty thousand years.

What's the use? I'm going fishing.

The tyranny of yesterday can be softened only by the lure of tomorrow or the grip of today.
—Journal of Outdoor Life.

THE USE OF PITUITARY SOLUTION IN LABOR

An investigation of the use of a powerful drug such as pituitary substance must be of interest to every general practitioner, for the very good reason that he does the bulk of the obstetric work and that it is in tardy labor that this drug finds its most frequent employment.

In *The Wisconsin Medical Journal* for July, Dr. E. E. Tupper, of Eau Claire, reports on such an investigation which he undertook in the expectation of arriving at a definite modus operandi of administering hypophysis solution.

An examination of the available literature disclosed the fact that in a not inconsiderable number of cases on record the faulty or reckless use of this remedy was followed by serious and even disastrous consequences. There are recorded at least 16 cases of ruptured uterus; other untoward complications due to the incorrect use of the pituitary substance being, postpartum atony of the uterus, fetal asphyxia, maternal collapse, eclamptic convulsions, tetanus uteri, and premature separation of the placenta. While reliable and experienced obstetricians declare that, in properly selected cases, pituitrin has no equal, they are equally emphatic in their assertion that the drug has no place in *normal* obstetrics. The most authoritative opinions are virtually unanimously to the effect that pituitary solution should not be administered except in the presence of a real scientific indication; also, that its use is governed by the same conditions as the forceps-operation, that is, *the head must be engaged, the cervix completely dilated and obliterated, no mechanical disproportion between the child and maternal parts must exist.* Unless these precautions are observed, disaster may result.

This, also, is the burden of the replies received by the author in question in response to letters sent by him to a dozen or more of the leading obstetricians in the country. However, similar letters addressed to about fifty general practitioners in the country surrounding Eau Claire showed that these are prone to be less exacting and careful in determining the presence of exact indications for the use of pituitary solution. Indeed, it is to be feared that ofttimes the desire to terminate a certain case of labor as rapidly as possible was the deciding factor in the use of this drug. Also, it may happen, as is reported about a certain physician. This accoucheur, when asked by his patient whether he had given her the injection of pituitary solution, so as to enable her to

go to sleep, coolly replied: "No, I gave it so that I might get a chance to sleep."

Certain it is, that pituitary solution many times is given in cases in which it is not clearly indicated, and, likewise, in unduly large doses. It has often been pointed out that an ampule of pituitary solution contains more of the remedy than is ordinarily required. Instead of the earlier 1-mil doses (15 drops), many obstetricians now find 3 drops to be fully effective; this having the advantage of being sufficiently mild in action and it can be supplemented by repeating the injection; while an excessive dose is out of control once it has entered the circulation. Also, the precaution not to administer this remedy in cases of primiparas is well taken, because of the great injury that severe and prolonged uterine contractions may produce in the less elastic and unyielding rigid portions of the primiparous birth-canal.

It would seem to be supererogatory to insist that the drug should never be administered unless the fetal head is well engaged; yet, this simple indication has been disregarded by many, with serious consequences to the mothers. One unfortunate physician is reported to have paid for his recklessness in giving pituitary solution improperly to his own wife, by causing rupture of the uterus.

From all this, it is to be concluded that pituitary solution not only is one of the most important means to terminate tedious labor-cases, in the presence of definite and well-established indications, and thus a means to prevent needless suffering, but, also, that it is an extremely sharp and two-edged weapon, which should, and must, be employed with the greatest care and only when clearly indicated.

Nobody graduates when they receive their diplomas. They only begin to graduate, and those who become commandingly important in their profession, continue to be faithful students of their profession through all the years. —Martin G. Brumbaugh.

AUTOGALACTOTHERAPY: A SUGGESTION

Charles H. Duncan has most vigorously tried to popularize his suggestion of adopting the dog's method of treating wounds—licking off the secretions. Beastly idea! The allied propositions of administering infected pus by the mouth, of the mother licking up the excretions of her sick babies, that her milk may transmit protective bodies, are likewise so repugnant that the argument, that by such measures lives may be saved which otherwise would be lost, does not seem altogether conclusive. Still, if the soldier could, in that way, cure or prevent the development of tetanus and were willing to use this filthy method, there is no law against his doing so. We can conceive of emergencies where the delay of carrying out laboratory manipulations might cause the loss of the life—and, after witnessing one solitary fatal case of tetanus, we are not prepared to reject any treatment that promises success.

Much of one's repugnance subsides when the infected secretions have been duly prepared and passed through a Berkefeld filter, after which they may be injected hypodermically or intravenously. And the advocate of the method may ask why we will let a human life be imperiled by a squeamish sentiment, since our ancestors did not hesitate to administer in musk the preputial smegma of the musk-deer?

A further development of the Duncan method is deprived of the disgusting element and seems worthy of consideration and widely extended clinical trial. Thus, Duncan maintains that the protective bodies are developed in the milk of the mother (human, the cow, or the lady goat), and that by the use of such milk as food very decided immunity may be acquired by the consumer.

Quite a number of cases are cited in which the clinical trial of the theory resulted in notable cures. That of Doctor Dieffenbach's may be cited: He became affected with rhus-poisoning and so acutely sensitized that merely riding through the country in his automobile sufficed to bring about a return of the malady. More than 30 remedies were tried, but, all of them failed. He then had a cow fed on the leaves of the rhus for several days and drank a quart of her milk. In a few hours, the stinging, biting sensation became less and the painful itching gradually subsided, while the cow seemed none the worse.

The importance of the field thus opened is very great. For, here we have a ready means of combating infections of any form or intensity, and, in the most direct and effective manner; for, no matter what combination of infective microorganisms may be at work, we can meet all of them without going to the trouble of isolating and classifying any. Known or unknown, it matters not at all. Those insidious and deadly septicemias that resist the all-per-

vading influence of sulphide saturation may, now, be brought under therapeutic control.

We sincerely hope that the repugnant features of Doctor Duncan's plan may not interfere with that full and extended clinical application by which its merits and limitations can alone be preconized. Wisely, we believe, he begins by presenting these distasteful features in all their naked ugliness, letting the reader meet the full force of the shock, at the same time disarming the funnygraph men, who otherwise would seize the opportunity to laugh the matter out of court, by rending apart any veil with which Duncan might have endeavored to envelop his ideas. He does not see any impossibility in a devoted mother's licking away the results of her infant's cholera infantum, if that offers hope of saving her little-one's life. Well, he may be right—did we not long ago announce our conviction that, with the advent of a baby, the most fastidious woman loses all sense of decency in so far as that babe is concerned?

This brings to the front an idea we have long been desirous of putting to the test. It is well known that, at least in their own country, the Italians suffer very little from tuberculosis in comparison with other races. It has been sought to make of this an argument for treating this disease as a house-infection malady, since for centuries Italy has been vacating dwellings in which tuberculosis has occurred. But, may it not be that the utilization, by them, of the goat as a wetnurse for their babies may have imparted to the latter the goat's alleged immunity against tuberculosis?

If this speculation is found to be true, there is a highly useful and profitable industry open for somebody: import some of the valuable breeds of Maltese or Italian goats that have been developed as milk-producers and supply their milk for the children of the tuberculous and others especially susceptible to this malady. Goats are not particular as to their food, they reproduce rapidly, and their milk is highly nutritious and palatable and generous in yield. Moreover, Nanny thrives in any part of our country. A few acres of Michigan sand, overgrown with the brush that constitutes the goat's favorite forage, surrounded by a dog-proof fence, and the facilities for daily shipping and distribution of the milk are all that is needed. It should, by no means, be difficult to secure customers for every drop that could be produced, and get a lucrative price. True, the constant presence of the male would involve serious olfactory objections. But, could not this "undesirable" (at all but certain times) citizen be kept in limited numbers and places, like the bull, for instance? Then the objectionable odor would be eliminated. At any rate—Want the job?

* * *

Solomon was right, there is nothing really new under the sun. Duncan by no means was first in recommending the utilization of immunizing milk. Gregory even now is defending the idea that goats are liable to tuberculosis, and, *"therefore,"* the use of their milk confers an immunity that would not be had from the milk of animals not tuberculous. Von Behring suggested in 1903, feeding infants with milk from tuberculous or immunized cows. Hamburger objected that the immune-bodies in the milk could be of use only during the first few weeks of extrauterine life and that they subsequently would be disintegrated by the digestive principles. In this connection, it might be well to remember that Weir Mitchell found that rattle-snake venom became innocuous when swallowed, and yet, this substance is a most powerful digestant itself.

In 1911, Kleinschmidt isolated amboceptors from raw cows' and human milk. In 1915, Moss, of Johns Hopkins, described his attempt to immunize calves against tuberculosis by feeding them the milk of vaccinated cows. Rosenberg published enthusiastic reports of success with the use of immune-milk, and established a service of it (*N. Y. Med. Jour.*, Oct. 11, 1913). He considered it a prophylactic as well as a cure for typhoid fever and tuberculosis.

All of which goes to prove the truth of a discovery we made years ago, namely, that there are smart folks in existence besides ourselves. In truth, whenever we develop something extra good, we turn to the records and rarely fail to find that it already has been discovered several times before. Still, since the papyrus of Ani disclosed many of Solomon's wisest sayings among the maxims dating back to about 1000 years before Adam, we do not feel so badly about our loss of the glories of precedence. To Duncan, there may come the honors of reviving a forgotten method and bringing into practical use—and that is honor enough.

Leading Artieles

Blood as Evidence of Gastric Ulcer

By A. L. BENEDICT, A. M., M. D., Buffalo, New York

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EDITORIAL COMMENT.—The views and teachings as regards the significance of blood, in the diagnosis of gastric ulcer, are so greatly at variance that it is important to obtain the opinion of a recognized gastroenterologist like Doctor Benedict, who has based his conclusions upon wide practical experience and careful observation.

SOME years ago, the writer was quite sharply criticized, in a meeting of the American Gastroenterologic Association, for emphasizing the importance of blood in the diagnosis of gastric ulcer. In no spirit of obstinacy, but, because an attempt to view matters from the standpoint of the critics only has resulted in a confirmation of the opinion then expressed, it has seemed desirable once more to bring this matter before the profession, although what is to be said by no means is new or in any sense original.

Some Evidences of Gastric Cancer

While recognizing the suggestive value of pain, subjective as well as objective—in the sense of being produced only by pressure, more or less definitely located, as in the epigastrium, at the eleventh left rib posteriorly, having a time-relation to ingestion, as in regard to the time-honored differentiation that the pain of ulcer is increased by taking food, while that of hyperchlorhydria is allayed—it may be said that none of the pain-symptomatology is accurate either positively or negatively. This may appear to be a dogmatic assertion: if so, it is the dogmatism of clinical cases, not of any attempt at authority.

The relation of ulcer to secretion (especially of hydrochloric-acid secretion) is also, although not definitely, diagnostic, either positively or negatively. We ridicule the early notion that the concentrated hydrochloric-acid of the gastric juice eats a hole into the stomach; we recognize the fact that the gastric juice in the typic case of gastric ulcer rarely, if ever, acts merely as a digestant of tissue that has previously undergone local death from organic vascular changes, although it is rather likely that this somewhat crude explanation does apply to certain forms of gastric ulcer in the aged or in those with preexisting vascular lesions. We recognize that there are many forms of gastric hemorrhage, quite a good many corresponding accurately to the general definition of gastric ulcer, though not typically peptic. Yet, subconsciously we have not got away from the connection between hyperchlorhydria and gastric ulcer.

If we examine statistics of series of gastric ulcers, as that collected by Ewald some years ago, we find that the assumption of hyperchlorhydria in many instances has been based upon a qualitative test with vanillin-phloroglucin or resorcin-sugar, indicating merely that free hydrochloric-acid was not entirely absent; that, in other instances, hyperchlorhydria has been inferred from a high total acidity, although we know that high total acidity as a rule is connected with fermentation and then mostly with a quite low hydrochloric acidity and that, with few exceptions (probably not over 10 percent), the total acidity of hyperchlorhydric cases is not over 75 degrees. Yet, if we wish to combat the preconceived idea of the association of hyperchlorhydria with gastric ulcer, we are confronted with very obvious contraindications to our scientific

curiosity, in the acute stage of ulcer. Ewald's careful criticism of the statistical evidence available resulted in the conclusion that approximately one-fourth of all cases of gastric ulcer were hyperchlorhydric, a fourth were hypochlorhydric, and half of them were euchlorhydric. In other words, there was a perfectly mathematic demonstration of the nonrelation of hyperchlorhydria and gastric ulcer.

Hyperchlorhydria, and Gastric Ulcer

The writer has nothing original to communicate on this subject, except, perhaps, the following few remarks. A considerable part of gastric practice deals with hyperchlorhydria. Let us not discuss here whether these cases are properly considered functional; whether there are or are not special parietal, oxyntic cells; whether hyperchlorhydria is or is not the consequence of an anatomic alteration either of special hydrochloric-acid secreting cells or of gastric glandular elements collectively; the fact remains that there is a large clinical group of hyperchlorhydric cases, whose manifestation are pretty directly owing to the excess of acidity and which are relieved, temporarily or more or less permanently, when the excessive acid secretion is abated. Some of these cases are included with gastric ulcer, the majority are free from positive evidence of ulcer and, of such, the writer does not recall a single instance in which ulcer has subsequently developed. This statement should not be taken at more than its face value. It is not a guarantee that no case, observed as gastric ulcer, has previously had an attack of hyperchlorhydric heartburn nor that all of the cases of hyperchlorhydria seen by the writer have been demonstrated not to have developed gastric —or duodenal ulcer.

But, hyperchlorhydria is a very common condition, gastric ulcer by no means is rare. If there were a notable etiologic relation, it would be conspicuous in any fairly large series of the former, with ordinary opportunities for observation and rather more than the ordinary care to follow up the subsequent history. The converse—starting with the case of ulcer and following it back into the history—is not so susceptible of proof. From the symptomatic standpoint, a great many cases of ulcer excite the suspicion of prior hyperchlorhydria; but, these symptoms are unreliable unless verified by actual gastric analysis, and the writer does not recall a single personally observed case of ulcer with an authentic history of previous demonstration of hyperchlorhydria. It must, further, be remembered that the surgical diagnosis of ulcer is much more facilely made than is the medical, and that transient and probably really functional hyperchlorhydria is a very common occurrence and not of much moment, provided it occurs only transiently and occasionally, as a result of some emotional disturbance or the irritation from a particular meal, and shows no marked tendency to recurrence. The chances are that most cases of ulcer of the stomach (or of any other disease, from corns to cerebral apoplexy) have had a few attacks of hyperchlorhydria. At any rate, all of them have had gastric symptoms indicative of past hyperchlorhydria.

If we bear in mind the general definition of an ulcer as a more or less superficial solution of continuity, it is obvious that its most characteristic sign (barring visual inspection, which not often is possible or at least practicable in gastric ulcer) is hemorrhage. This does not imply that the bleeding necessarily is massive or absolutely continuous, nor does it apply to a cicatrized but not, in the histologic sense, thoroughly healed ulcer. But, allowing for reasonable periods of observation, including the active stage, it does apply to a degree somewhat approaching the pathognomonic, not in the sense that an ulcer always bleeds at any given time (indeed, we may admit a very superficial loss of continuity of epithelial structures without there being any bleeding) nor that blood always comes from an ulcer, but, in the sense that the lesion has a genuine etiologic relation to the sign. These purely general remarks apply to gastric ulcer only as one phase of the subject.

It must not be supposed that the writer ignores other diagnostic elements, even the purely symptomatic ones of pain, tenderness, effects of food, and so forth. Certain more or less mechanic signs of gastric ulcer exist that are well known and need not be discussed at length. Indirect evidence of ulcer from x-ray-findings is well understood and quite reliable, though not infallible, either positively or negatively, unless in favorable, marked, cases. Direct inspection, by section or esophageal gastroscopy,

is an ideal method of diagnosis, but, as yet limited, because of many practical reasons, to a very few cases.

Hemorrhage the Crucial Sign of Ulcer

Thus, the crucial test of gastric ulcer is hemorrhage. So long as blood can not be demonstrated in the contents of the alimentary canal, it is only occasionally that other signs warrant a positive diagnosis of ulcer, while if blood is present, a differential exclusion of other sources may usually be made, so as to warrant the diagnosis of ulcer. As the writer has no partisan desire to magnify the importance of this sign, but, merely to make it as accurately diagnostic as possible, it is incumbent to consider various additional factors.

A massive, comparatively sudden hematemesis ordinarily indicates bleeding from the stomach and probably in a considerable majority of cases results from gastric ulcer, in the limited sense. But, the differential diagnosis of hematemesis is not absolute. If a patient has just had a tooth extracted or a tonsil resected or if any other hemorrhagic traumatism or lesion involves the mouth, nares, pharynx, and upper esophagus, blood ejected from the mouth is usually not due to hematemesis; even if swallowed and vomited, the hematemesis obviously, unless by coincidence of lesions, is not due to gastric bleeding of any form.

In the rashness of youth, the writer held, if he did not so express, the opinion that anyone who could not differentiate hematemesis and hemoptysis was a fool. However, one case is recalled which distinctly included the writer in this category. The patient, known and observed for several years before (and afterward) had a single, fairly massive hemorrhage—specimen saved for examination—which was not directly observed. There was nothing in the past nor immediate history, nor in the physical and microscopic examination, nor in subsequent developments by which the source of the hemorrhage could be located.

The writer was among the earlier reporters (in the beginning of the nineties) of hematemesis from ruptured varices of the lower esophagus and of dilated veins of the stomach itself, due to portal obstruction and virtually always to hepatic sclerosis, although other causes of portal obstruction may produce the same phenomenon. This condition is now well-enough known not to require discussion, but, the following case may be mentioned as indicating the difficulty of absolute differentiation: A man past middle life, with contracted liver, had a hemorrhage from the stomach, typically venous, but, not grumous. It was considered of the portal-obstructive type. He recovered, but, a year or so later, laryngeal tuberculosis developed and he died without having had further hemorrhages, except the small blood-stained hemoptyses to be expected. At necropsy, the diagnosis of hepatic sclerosis was confirmed, but, there was also a small scirrhous nonulcerating gastric cancer. While this had nothing to do with his death, it reopened the question of diagnosis of the previous hematemesis. No one can assert that he did not have a hemorrhage from the same cancer, which subsequently healed over, or that he did not have a more or less typic gastric ulcer—whether peptic in the strict sense or because of local organic vascular disease—which was the source of the hemorrhage and on which the cancer developed, nor can the initial diagnosis of back-pressure hemorrhage be denied, even with the necropsy findings showing other plausible sources.

More or less acute gastritis (the definition between acute and subacute is being differently made by various authorities, according to rather arbitrarily assumed etiologic factors) is well known to cause hemorrhage. A case of well-marked alcoholic gastritis may be mentioned. The bleeding was considered of this nature and not due to ulcer of any type, beyond the inflammatory condition which conforms to the broad general definition of ulcer, but, is usually not thus designated. However, the liver was contracted, suggesting the possibility of back-pressure venous hemorrhage, and there was a suspicion of cancer, in which the writer did not agree, as the case was already sufficiently explained. As a matter of fact, small carcinomata were found studding the sclerotic liver. Apparently they had not directly influenced the course of the case nor was any cancerous focus demonstrated in the stomach—but, the majority of hepatic cancers are secondary to gastric cancer and alcoholic gastritis, and hepatic scleroses obviously do not exclude the possibility of gastric cancer or ulcer.

[*To be continued.*]

Luargol ("102"), The New Remedy for Syphilis

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[*Concluded from September issue, p.* 631.]

"SECOND case. Syphilis of the muscular tissue, appearing ten months after the chancre. The hardened testicle became normal during the ten-days treatment and, when the patient was examined two months later, he appeared in perfect health.

"Two cases of syphilitic ozena, completely cured after five injections.

"A case of rupia syphilitica covering the entire thorax. History of chancre sixteen years previously. At present, the center of the syphilide is cicatrized. The borders are covered with hard, thick, green crusts; when one of these is removed, the surface bleeds. Record: October 20, 1915: Salvarsan, 0.15 Gram. October 22: 0.30 Gram. October 27: 0.45 Gram. No amelioration whatsoever. Two injections of gray oil—stomatitis. November 21: 0.10 Gram luargol. November 24: 0.20 Gram luargol. November 28: 0.20 Gram luargol. December 1, 0.20 Gram luargol. Amelioration. Some of the crusts had fallen, leaving a cicatrix. December 4: 0.20 Gram luargol. December 8: 0.20 Gram luargol. December 11: 0.20 Gram luargol. Noticeable amelioration. December 15: 0.20 Gram luargol. December 20: 0.20 Gram luargol. December 27: 0.20 Gram luargol. December 31: 0.20 Gram luargol. January 11, 1916: 0.20 Gram luargol. January 14: 0.20 Gram luargol. January 19: 0.20 Gram luargol. There remains uncicatrized only a line of the original syphilide. January 23: 0.20 Gram luargol. Cicatrization complete. Total dose administered: 2.90 Grams.

Case of Syphilitic Myelitis: History of a chancre seven years past. Entered hospital January 26, 1916, with a Brown-Séquard syndrome, incomplete on the right side. Right side paralyzed. Movements of extension almost impossible. Notably diminution of sensation to the level of the umbilicus. Exaggerated reflexes of the right side, with epileptoid tremors. Positive Babinski sign on both sides. Abdominal reflexes abolished. Defensive reflexes exaggerated to the second dorsal vertebra. Retention of urine. Purulent cystitis. Urine is passed in dribbles. Incontinence of fecal matter. Patient's bladder washed out with mild solution of nitrate of silver.

January 28: Injection, 0.05 Gram "102". February 2: Injection 0.10 Gram "102". Injections well supported. Paresis diminished, patient retains feces. Urine clear. Right side began to show reflexes, with normal left clonus.

February 5: Injection 0.20 Gram "102". February 8: Patient can stand, able to change alone from one bed to another.

February 9: Injection 0.20 Gram "102". Patient can walk around bed.

February 14: Patient shows subicterus, with Gmelin-Hintz reaction. Put on milk diet.

The report was written at this period and we are denied the further results of the treatment, which could not fail to be of absorbing interest.

Syphilitic Aneurism of the Aorta: History of chancre more than twenty-five years past, which was treated energetically with protoiodide of mercury.

In 1906, mucous patches appeared in the mouth, which were left without treatment. On two occasions, the patient, a veterinarian, took protoiodide of mercury, but did not bear it well. In 1914, the patient began to perceive a tumultuous beating of the heart. In 1915, an ectasis manifested itself by thoracic and cervical pains; nevertheless, the patient continued his army service as a veterinarian. The patient had 10 injections of mercuric iodide in November and 10 in December, which, though, were badly borne and resulted in stomatitis.

Result of examination: Marked depression in the recumbent position. Thoracic pains. Insomnia. Grating double murmur at the aortic orifice. Pulsation in the substernal space of the arch of the aorta. The double heart-beat of Stokes pronounced. Inequality of pulse; the left more feeble than the right. Radiogram, taken Novem-

ber 14, shows pronounced frontolateral shadow.

Treatment: January 13, 1916: Injection of 0.05 Gram of luargol given. On January 16: Injection of 0.10 Gram of luargol given. On January 19: Injection of 0.10 Gram of luargol given. On January 23: Injection of 0.10 Gram of luargol given. January 16, 19, 23, 27: Injection of 0.10 Gram of luargol was given. All were well borne. The oppression was diminished; the patient slept better. The pulse seemed equal. Then the injections were continued: On February 6, 0.10 Gram; February 10, 0.10 Gram; February 13, 0.15 Gram; February 17, 0.20 Gram; February 20, 0.20 Gram. Now there was notable amelioration. The oppression and insomnia had disappeared. The rough murmurs were replaced by those of soft character; nevertheless, the pulsation in the arch of the aorta was perceptible, though diminished at the second and third right intercostal spaces. A frontolateral radiogram taken February 25 showed: Projection orthogonal. As compared with the one taken in November, it showed diminution by a good centimeter in the size of the shaded part. Total dose administered, 1.20 Gram.

Gangrenous Chancre: Hard chancre on the dorsal surface of the penis ten days old. Adenitis of right inguinal space. No roseole. Borders of ulcer black. Center of ulcer has perforated the prepuce and patient urinates through this opening, the edema having caused complete phimosis. Ulcer exhales a gangrenous odor. Microscope reveals ulcer filled with spirilla and cocci.

Treatment: January 19 and 21, 1916: Injection of 0.20 Gram "102", January 25: Aspect of the chancre completely changed. Scabs have come off. Border is rose colored and clean. Ulcer dry and plainly cicatrizing. January 26: Injection of 0.20 Gram "102". January 31: Injection of 0.30 Gram "102". Chancre has cicatrized. February 4: Injection of 0.30 Gram "102". February 7: Circular perforation of prepuce remains. No roseole. Total dose, 1.20 Gram.

This report, in spite of the fact of its being made prior to the terminal observation of the case, presents a uniformity of result that inspires the reader with the hope of the certainty, that in this new remedy we have a bactericidal agent that fully masters the syphilitic germ.

Among others in the service of Professor Fournier at the Cochin Hospital, my attention was arrested by the patient whose photograph is shown in Figure 1, taken at his entrance, and in Figure 2, which was taken two weeks after he received his first injection of luargol, and when he had received altogether five injections. A double chancre had developed at the juncture of the glans and prepuce on the 18th of January, 1916, following exposure on the 5th.

FIG. 1. BEFORE TREATMENT, SHOWING RUPTIAL CRUSTS

On the 3rd of February the Wassermann reaction was positive. The patient's doctor made 49 injections of hectine, one every day; the last 9 being of 20 cgm. each. During this period, he also took 30 pills of protoiodide of mercury and 250 Grams of Guilbert's syrup (a mixture of mercury and potassium iodide). This treatment continued from February 10 to May 2. The chancre had disappeared on the 20th day of March.

The man entered Cochin Hospital May 5, with the rupial syphilide crusts as shown in Figure 1. He was given injections of luargol twice a week, Mondays and Thursdays, beginning with 10 mils (Cc.) and increasing to 30 mils at the fifth injection, when photograph No. 2 was taken. Amelioration was apparent after the first injection and the crusts began to dry and fall off after the second. He will receive 10

injections in all, when, it is expected, he will be discharged as cured.

Method of Preparing and Injecting the Solution

Luargol, or "102", is insoluble in water. It is soluble in sodium hydrate, of which 0.4 decigram is required to neutralize and dissolve 1 Gram of luargol.

Pour into a sterile graduate 15 mils (cubic centimeters) of a 4-percent solution of sodium hydrate, add 1 Gram of luargol powder, then stir with a glass rod. The resultant mixture is almost black. Add a quantity of normal saline solution, according as to whether the injection is to be made with a piston syringe or allowed to flow into the vein from a suspended container through a rubber tube. In the former case, the quantity should be less than in the latter and of greater concentration: also must be introduced very slowly at the first sitting.

FIG. 2. SAME PATIENT AFTER FIVE SEMI-WEEKLY INJECTIONS OF LUARGOL RUPIAL CRUSTS

Whenever a large number of patients are to be treated in succession, as in a hospital, an amount sufficient for all may be made up, since the mixture will keep for two or three hours. For practitioners who have but a limited number of patients Doctor Danysz has prepared a complete outfit, everything ready for use, and comprising: (1) A tube containing the luargol powder. (2) a bottle containing a quantity of caustic soda for dissolving the luargol (and to make 20 mils). (3) A paper filter in a hermetically sealed tube sterilized at 180° C. (4) A sterile glass rod.

Proceed as follows: (1) With a file, cut at the line marked on the bottle of caustic soda. (2) After shaking the luargol powder to the end opposite from the label, on the tube containing same, cut with a file at the point marked and let the powder fall into the bottle holding the caustic soda, being careful not to moisten the end of the powder-tube. (3) Agitate, with the glass rod, the powder in the bottle for five minutes or until it is entirely dissolved. (4) Adjust the paper filter over a sterile graduated glass and slowly pour the liquid from the bottle until all is filtered. (5) Fill a sterile syringe with 20 mils of the filtered mixture when you are ready to inject.

Technic of the Intravenous Injection

(1) The patient must have eaten nothing for four hours prior to the injection. (2) The injection can be made most easily at the bend of elbow. The patient may sit or lie, but the arm should rest upon some firm support. (3) Paint the point where needle is to enter with iodine, then remove this with alcohol. (4) Place a rubber tube or band about the biceps and draw tight until the veins at the bend of the elbow swell out prominently. (5) Seize the arm with the left hand, so that the thumb comes to the front, and, upon the vein chosen for the injection, press inward and downward with the thumb so as to stretch the skin and fill the vein and with the right hand introduce the blunt needle of about 5 cm. in length. It is well to do this in two movements. First, pierce the skin. Second, bring the point of the needle to ride on top of the vein and pierce the vein, when the venous blood will at once flow from the needle. Push the needle slowly into the lumen of the vein. If the blood ceases to flow, it is a sign that you have pierced through the vein and are no longer in the lumen, in which case draw back the point of the needle slowly until the blood flows again. (6) If your maneuver is not successful, try another point.

Finally (7), press the piston of the syringe, which you have previously filled with

the solution, until all air is expelled and adjust to the needle, without displacing it, and slowly inject. When the dose exceeds 0.15 cg., the injection should be made very slowly. After making the injection, the patient should repose an hour before exercising.

The first injection preferably should be made in the evening, the patient having eaten nothing since noon, and then he should at once go to bed; which procedure sometimes will favorably influence the reaction following the first dose. Three or four hours after the injection, the patient may be permitted to take some milk, soup, or vichy water or beer, as may be preferred.

Indications for Employing Luargol

Luargol exercises a powerful specific action upon treponemes and upon trypanosomes. It, therefore, is indicated in all those cases where salvarsan and 914 are employed in men or animals. In addition, it has a remarkable reconstructive action and is indicated in all the morbid conditions where the remedial action of arsenic is desired.

In all of the stages of syphilis not accompanied by manifestations connected with the nervous system, any adult in fair health can be given the remedy in the following serial doses: 0.15, 0.20, 0.25, 0.30, 0.30, 0.30 centigrams; in all, 1.50 Grams in six injections, with 2-, 3- or 4-day intervals between injections. To a woman in like condition, can be administered: 0.10, 0.15, 0.20, 0.25, 0.25, 0.25 centigrams; a total quantity of 1.20 Grams.

In syphilis of the nervous system, it is necessary to proceed with greater prudence. Begin with an initial dose of 0.05 centigrams and increase the subsequent doses by 0.03 to 0.05 centigrams at a time, so long as the preceding dose has been well borne. In this way the dose can finally be brought up to one of 0.30 centigrams.

As a reconstructive and in tuberculosis, luargol should be administered in doses of 0.05 to 0.10 centigrams. The former dose may be repeated every two or three days for five injections, after which an interval of ten or fifteen days is allowed to elapse before starting anew.

Contraindications

There are no absolute contraindications to the use of luargol aside from the presence of asystole, uremia or a cachetic condition, except that of the syphilitic condition itself. The physician should exercise care in the presence of cardiovascular affections and in syphilitic conditions in which there is an acute or subacute development of meningitis, acute nephritis or icterus; in which case the initial dose should not exceed 0.05 cg., this then being increased by the slow progression as indicated above.

It gives me great pleasure to be the first one to bring this new remedy to the notice of the American profession, for, from the evidence already afforded by its brief employment, it promises to prove a distinct advance in the treatment of syphilis.

A Study of Physostigmine

By A. L. NOURSE, M. D., Anniston, Alabama

FROM the verdure-entangled, swampy river-banks of the tropical West-African coast country, comes the calabar-bean, although it has been introduced into like environment both in Brazil and India. This plant is of the natural order leguminosæ, that order with butterfly-like flowers also giving place to the nonvenomous, nitrogen-bearing and protein-rich pea, bean, and lentil, all three foods of the world. In fact, the seeds of this tropic exotic, together with their containing legume, are remarkably like some of the edible legumes of the temperate zones, so that, their taste being without suggestion of medicinal properties, there have been many cases of accidental poisoning from eating them.

Systematic study of the calabar-bean seems to have begun at about 1859, when Doctor Balfour, of Edinburgh, began to cultivate in the botanical gardens of that city some seeds sent him by Doctor Christison from the Gold Coast of Africa.

Balfour classified it botanically. Chemical and therapeutic investigation followed, an active principle being reported in 1863. By 1867, the presence of two alkaloids—physostigmine and eserine—was reported

by investigators, and it has now been demonstrated that they are identical. Here, again, we have an instance of a most useful substance finding its way into official recognition but very slowly. The writer believes that the first official mention of physostigmine was in the British Pharmacopeia of 1885, although, surely, a drug with the power of contracting the pupil in less than toxic dosage was a priceless gift to the profession from the hands of Fraser, Hesse, and other investigators.

As with many other articles of now common use in medicine, we find the calabar-bean to have first come to scientific attention through the use by primitive peoples. However, this hardly is one that can be considered to have received employment for beneficent purposes; for, these beans were used for the detection of crime—apparently not agreeing with orthodox tribal opinion and custom to be included under this heading.

In most things generally accepted by a race or group of unenlightened people, there generally is found an element of truth—a little fragment of "ancient wisdom." For example, there is the ordeal of making a group of accused persons chew rice for a short time. The guilty one's rice is dry. This, because of the well-known physiological fact that fear checks salivary secretion. But, the calabar-bean dosage seems to have been so regulated that the one who in advance was adjudged guilty got the lethal dose. The matter apparently was (probably still is) so arranged that vomiting occurred or nothing at all happened to the native lady or gentleman enjoying what in a more effete social organization is termed "a pull." A fine thing to be able to pull off any desired iniquity and be proven not guilty by the gods themselves. This discounts jury fixing. But in the not remote past, was not the hot-metal test used on certain accused persons? This even in Merrie England by our own Anglo-Saxon ancestors? Who regulated the heat in this choice ordeal of orthodoxy?

Physiological Action

The most marked physiological effects of physostigmine are: contraction of the pupil, spasm of the accommodation-muscles, and eye-lid twitching, when used locally. Under internal administration, muscular twitching becomes general under toxic dosage, but motor paralysis finally ensues. Asphyxia, through depression of the respiratory center, is, however, the usual cause of death, this being aided by the spasm of the bronchioles. The effect on the heart is at first: increase of force, but decrease of frequency of the beat. Arterial tension is raised through stimulation of the arterial nerve-endings, causing contracture of the vessels, and from splanchnic effects resultant upon intestinal contraction. Peristalsis is markedly stimulated and the effect on unstriated fiber extends to the bronchi; hence, the small dose, often repeated, is suitably employed as a stimulant of the bronchial secretion.

Physostigmine may be grouped with pilocarpine, paralleling its action, as it does, quite closely in producing increased glandular secretion, except of the mammæ, in myotic action, and upon some of the unstriped muscle groups, this not, however, extending to those of the arterial walls. The two drugs possess remarkable similarity of action, especially considering the very wide race difference in their botanic origin. The two myotic, secretion-promoting drugs are not, however, to be considered as interchangeable indiscriminately, by any means, but they should be studied together, and probably will be found to be synergetic. The calabar-bean alkaloid exerts its influence principally upon the motor tract of the cord and upon peripheral nerve-endings, being depressant to the former and stimulant to the latter. Reflexes are at first reduced, then completely abolished.

Physostigmine in Modern Practice

The salicylate of physostigmine is the salt usually selected. The reason for this is not, as in the case of many alkaloids, because of any modifying or synergetic action of the acid-radical, but because the salicylate is a permanent, soluble salt. The sulphate is markedly deliquescent, hence, undesirable.

In treating glaucoma and other conditions requiring a promptly acting myotic, one is practically limited to physostigmine (eserine), pilocarpine, and arecoline. The latter, an alkaloid from the areca-nut, now is receiving attention. The eye-specialist, as well as the general practician obliged to handle any eye-work, possesses in physostigmine one of the most valuable therapeutic aids, especially in the treatment of glaucoma; intraocular tension being influenced here, not alone by pupillary contraction, but

by the contractive effect on the other susceptible structures, as well.

Wherever a myotic is indicated, physostigmine usually receives first thought, whether the case be one of glaucoma or simply one where it is desirable periodically to counteract atropine effect, in order to avoid adhesions from maintaining a fixed position of the iris. Where established adhesions exist, physostigmine and atropine in alternation may serve to break them up; the mydriatic and myotic alternation having a sort of massage effect.

Aside from the employment in ophthalmology, the principal use is, to stimulate intestinal peristalsis. Where constipation exists, due to deficient muscular tone of the intestine, the drug is well employed. Often this should be the agent of selection, instead of its physiological antagonist, atropine. With diminished muscular tone of the intestinal coat, the remedy should be given a trial in that large group of patients whom we desire to relieve without establishing either the enema or cathartic habit. A liquid-paraffin preparation night and morning, followed by physostigmine, giving two of the 1-1000-grain granules for two or three doses, plus diet regulation, and, where feasible, massage over the colon, will relieve many cases of stubborn constipation, Here, we are depending upon the physostigmine for direct stimulation of the nerve termini in the intestinal musculature. This being a certain result of the administration in properly regulated dosage, we can not fail of results where we are not at fault as to our diagnosis of the condition that is responsible for the failure of the bowel action.

It is, however, in acute conditions, especially postoperative, where the most brilliant results are to be expected from the calabar-bean alkaloid. The late works on materia medica make special mention of it in this connection. That postoperative ileus demands physostigmine, seems to be the consensus of many observers. Removal of flatus is usually well accomplished with the agent alone, although a hypodermic of pituitrin may be given, and the effect followed up with physostigmine. The action of pituitrin and physostigmine upon unstriated tissue is similar, that of the former, however, being much more transient.

Pronounced softening of the pulse is the sign of the physiological effect of physostigmine, and it is the point at which it should be suspended. *Do not wait for contraction of the pupils,* as this is largely the effect on motor-oculi nerve-termini of the local application, and an enucleated eye will respond to the stimulus thus given. In traumatic tetanus, in strychnine-poisoning, and in other conditions of muscular excitement due to spinal irritation, the drug is likely to be found of service, either alone or in combination with chloral. Still, the weight of evidence does not give it much value in these conditions. Atropine, being the direct physiological antagonist, calls for it in cases of poisoning or overdosage.

The rate of elimination of any drug administered must be taken into consideration; therefore, in giving fractional doses, their sum should not be allowed to exceed the total of a maximum dosage. An absolute dose limit can not be set, but, in the alkaloid under consideration, 1-30 grain may be considered the maximum for a person of average weight and resistance to drug-stimulation. With a patient under surveillance, an idiosyncrasy against an agent of well-defined physiological action or exaggerated results from emergency administration of unusual potency may be corrected by giving the physiological antagonist, thus relieving us of undue anxiety in handling the stronger medicinal agents, under stress of emergency. In this case, the antagonist is, of course, atropine.

Use physostigmine for flatus of postoperative arrest of peristalsis, with its distressing reflexes, and in the selected cases of constipation, with or without flatus, that may call for it.

THERE are two kinds of courage—static and dynamic Static courage is the courage that meets an emergency when it comes. Dynamic courage is the courage coupled with vision, that looks ahead, decides what is coming, and then risks a great deal in meeting an emergency that has yet to show itself.—Darwin P. Kingsley.

The Treatment of Constipation

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IN gynecology, as in other departments of medicine, the doctor often finds himself hampered or his efforts entirely nullified by the evil effects of constipation. But, this condition is so nearly universal, and, yet, so unnecessary, that the cynic finds in it abundant grounds for commenting on the shiftlessness of the human race. The blame for this state of affairs rests, not alone upon the laity itself, but, also to a large extent upon the medical profession. The busy doctor finds it so easy to prescribe a laxative and then leave the management of the case to the patient himself, that it is little wonder that failure is the result and the patient goes on using stronger and ever stronger cathartics, until at last dynamite seems the only resource left. Too many doctors fail to realize that, to cure constipation, it is necessary to secure, not only the cooperation of the patient, but his or her (more often her) *intelligent* cooperation; and, therefore, we must combine education of the patient in the most important aspects of the matter with the prescribing of remedies.

When a patient says to me, "Doctor, can you give me something for constipation?" I make reply: "Yes. I can, but, if you really want to be *cured* of it, you will have to do something more than take medicine. You will have to be educated on the subject. You will have to get rid of some wrong ideas and get right ones in their places. As long as you believe that you can cure yourself by taking cathartics or eating bran or deluging your interior with quarts and quarts of water or as long as you think you must force a movement of the bowels every day, just so long are you doomed to failure. And when you have got right ideas on the subject, that is not enough. You must exercise the perseverance and self-denial necessary to carry them out. I can not cure you of constipation as I should do of an acute disease such as typhoid fever, because I can not see you every day and supervise the carrying out of my orders. But, you can cure yourself, if you will obey my orders, quit reading the health-articles in the daily papers and realize that you will need instruction and guidance until the cure is complete. You would not expect to be cured of diabetes by my giving you a single prescription and then not seeing you again. You would expect to see me at intervals, for supervision and instruction, and these are quite as important in curing constipation."

The reason why so few patients are cured of constipation is, that few of them have the knowledge and perseverance necessary to success and that so few doctors take the trouble to instruct them and see to it that the instructions are carried out. This field may not afford the opportunity for as brilliant and spectacular results, that will impress the public, as, for instance, does surgery, yet, in importance it holds a place worthy of the most careful and thoroughgoing work. We have only to bear in mind the part played by constipation in causing the various forms of autointoxication, in atheroma, in prostatic troubles, and in premature senility in general, to see that a more conscientious attention to this subject would add much to the comfort and length of human life.

The Etiology of Constipation

The almost universal prevalence of constipation is the result of a combination of numerous causes, of which one in particular stands out prominently above all the others. This is, our tendency to forget the true function of the rectum. Let us observe how this organ functions in a state of nature, that is, in the animals and in quite young children. The rectal gut is abundantly supplied with sensory nerves and its reflexes are easily excited. As soon as fecal matter descends from the colon into the rectum, the reflexes of that organ report the fact to its possessor, in the form of a very decided sense of discomfort. At once, the animal or the child seeks relief by evacuating the material that causes the discomfort. Thus, we see that the normal condition of the rectum is emptiness. In other words, it might be said that the true sphincter of the intestine is at the sigmoid flexure, because the presence of

fecal matter above this point causes no discomfort, while it does do so below. However, the civilized grown person ignores these facts and treats the rectum as if it were a storehouse, where accumulations may be left until it is convenient to get rid of them—a sort of pocket-edition of a traveling cesspool.

When material is allowed to lie in the rectum, that organ soon acquires a tolerance, the reflexes quiet down, the discomfort ceases, and the individual goes on indefinitely, carrying his load of waste, until the constipation-habit at last is so firmly established that he is compelled to take notice. Every doctor knows how frequently, in making vaginal examinations, we can feel through the posterior vaginal wall a hard bolus of fecal matter in the rectum and of which the subject is entirely unconscious, because that organ has lost its normal reflexes.

This tolerance is only one of many similar instances in the body. In intubation, when the tube first is inserted, the larynx resents the intrusion so violently that the patient coughs for a while incessantly and shows every evidence of distress; after a time, though, the irritation gradually subsides, until at the end of a few hours perfect comfort has supervened. In other words, tolerance has been established. A more homely instance might be quoted in the case of putting on our winter flannels. At first, the irritation of the skin is almost unbearable, but, in a few days, the cutaneous nerves have acquired full tolerance, and the trouble is over.

In many persons, this tolerance of the rectum has been so firmly established by years of neglect that only the most powerful stimulants will produce any peristalsis whatever. There is a considerable power of absorption in the mucous membrane of the lower bowel, so, the longer that fecal matter lies there, the drier it becomes; and, while the fluids absorbed often are injurious to the system, at the same time, the presence of the dry hard bolus constitutes a source of congestion of the mucous membrane and is almost certain in time to produce hemorrhoids, polypi or fissure. The latter condition is begun by the undue stretching of the anal sphincter in expelling large and hard masses. Slight tears of the mucous surface occur, and these do not have time to heal before they are again pulled apart by the same cause, until finally the patient has to endure the agonies of chronic fissure. Sometimes these tears become avenues of infection, with resulting abscess and fistula.

While neglect to answer the calls of nature and consequent loss of the reflex sensibility of the rectum is the largest factor in the cause of constipation, there are other causes worthy of note. Improper food, overeating, irregular hours for meals, all play their part, especially in those cases where there is lack of secretion and peristalsis of the small intestine, and insufficient flow of bile. It is in these cases that autoinfection flourishes, with its long train of evils, and appendicitis is liable to make its sudden thrust at the life of the patient. In most cases of lumbago and sciatica, the intestine is the source of the poison that causes the trouble in the nerves.

Constipation and improper food are responsible for the greater part of the ills of people past middle life, such as atheroma, high blood pressure, apoplexy, prostatic enlargement, and premature senile changes.

The Treatment

In undertaking to treat a bad case of chronic constipation, it is very important that the doctor should give the patient a little lecture or familiar talk on the subject, both for its psychological effect and for necessary instruction. Among the points that should be impressed upon the patient's mind most emphatically are the following:

1. He should not undertake to manage his own case, but, should look to his doctor for advice on every point, and should report progress every day or two, especially at first.

2. He must not expect to be cured without the use of drugs, neither must he expect to be cured by the use of drugs alone.

3. Constipation is a habit—a very bad habit—and the result of bad habits on his own part; and, the only satisfactory and permanent cure is, to establish a good habit in its place. This will take time and patience.

4. If he has been well cleared out by a cathartic one morning, he must not expect much of a movement, if any, the next morning, because it takes about forty-eight hours for a meal to travel the length of the intestine. Right here is where many patients make shipwreck in managing their own cases. Finding no movement occur-

ring the second morning, they take more physic, and before long they have to take a daily dose to get any action at all. A good movement every other day is enough for good health, at least temporarily while under treatment.

5. He must have explained to him the meaning of tolerance on the part of the rectum, and he must understand that the only way to keep that organ sensitive is, to keep it empty; in other words, he must answer the calls of nature promptly, no matter at what time of the day they come.

6. He should understand that the bowel may establish a tolerance for any particular drug, for bran or other coarse food or for injections of water, and that, therefore, we should not use any of these means often enough or long enough to establish a tolerance. By changing from one to the other frequently, until at last a habit of daily action is established by the bowel, we master the problem of curing constipation.

7. He should have a certain time for going to stool every day and then go without fail at that time, whether the inclination is felt or not. If he is very constipated, he should not use force, because that may produce piles or fissure; instead, he should take a good-sized injection of warm water, with a little soap or glycerin in it.

8. If the stools are habitually dry and hard or if there is an evident lack of peristalsis, glycerin is a good remedy, but, it must not be used too often. Once or twice a week an ounce of glycerin in 2 quarts of warm water, taken slowly from a fountain syringe while sitting on the edge of the bath-tub and leaning the body as far to the right as possible, will flush the colon to the ileocecal valve and give as good results as if the injection were given through a colonic tube.

I might remark here that I have never been able to understand why so many doctors, in giving a colonic flushing, advise the patient to lie on the left side. Surely, water will run down hill more easily than up, and when the patient lies on his left side the water, in order to reach the cecum, must rise in the colon against gravity. I always have my patients lie on the right side, and find it so easy to flush the colon that I seldom use the colonic tube.

The Medicinal Aids

Having attended to the patient's instruction and secured his cooperation, the next thing is, to select the laxative drugs to be used. Individual peculiarities must be taken into account, as a drug that works well with one person may fail to do so with another. Again, some cathartics act very well when taken occasionally, but, are not suitable for curing constipation. In beginning the treatment of an obstinate case, I usually select about three drugs, so that I can change frequently from one to another without using any one of them long enough to establish a tolerance for it and thus losing its beneficial effect.

Phenolphthalein, aloin and cascara are the three that I use oftenest, and many times only the first two. I order 1, 2 or 3 grains of the first at bedtime the first night. After breakfast the next morning the patient must go to stool, using warm water and glycerin, if needed. He should begin his breakfast with some juicy subacid fruit, such as grapefruit, orange or muskmelon. At all his meals, for a while, he should eat plenty of vegetables and coarse cereals, such as cracked wheat or bran-bread, and avoid cheese, much meat, and strong coffee. Bran and coarse cereals should not be used too constantly or too long. They spur up the activity of the bowel by their roughness as a whip does a tired horse, but, in time, the bowel becomes accustomed to the spur and no longer responds, when the last state of that man is worse than the first. I have found bran-bread constipation very difficult to cure. A bowel that has become so blunted in its sensibility that the scraping of bran against its walls does not rouse it is in pretty bad condition.

If the bedtime dose of phenolphthalein does not produce a good clearing out, I order one grain before each meal, until vigorous action is secured or until I am convinced that it is not suited to that particular patient. I do not hesitate to give 5 grains if needed—which, though, rarely happens. But, it seldom fails me. I regard it as the most valuable cathartic we possess. Its action is mild and pleasant even in full doses and it possesses one characteristic that no other cathartic has, so far as I know, namely: when it acts, it produces so little discomfort that, if the patient happens to be where he cannot reach a water closet, he suffers no inconvenience for even an hour or more. Then, also, it is not followed, like most other cathartics, by a reaction of constipation. Because of this

feature, I have sometimes cured constipation with phenolphthalein alone.

Still, usually after three or four doses, it becomes evident that a larger dose must be given; in other words, a tolerance is being established, and, so, it is better to change the drug, say, to aloin, ¼ grain, or the well-known combination of aloin, belladonna, strychnine, and ipecac. This should be taken only every other day, either at bedtime or after a meal, and after a few doses it should be substituted by cascara or some other drug. In this way, it is possible to get the best effect from each of them. After a week or ten days, we may come back to phenolphthalein, when it will act as well as at first. This principle of changing drugs should be followed, no matter what the remedy used.

A formula that has often given me good results is that of Doctor Waugh's anticonstipation granules. Each granule contains one twenty-fifth of a grain of aloin with suitable amounts of strychnine sulphate, atropine sulphate, oleoresin of capsicum, emetin and bile salts. To cure constipation, there are two ways in which these granules may be given. In some cases I have found it best to begin with a small dose and gradually increase, say, one granule after each meal the first day, two the second, and so up until the dose is found which is just enough to secure one or two good movements every day. This dose should be maintained until a regular habit is formed, and should then be gradually diminished until the patient can do without. The other method is to begin with a full dose of six or more granules after each meal and then gradually decrease. The only objection to this method is, that one may strike a patient with an idiosyncracy against aloin and get violent and painful results from a dose that is unduly large for him.

When the liver is plainly inactive, oxgall or, better, cholic acid may be used with good results. In some cases of sluggish liver, podophyllin acts well if given occasionally. Blue mass and other forms of mercury are favorites with many of the laity and some doctors, but, there are some objections to their use and I definitely abandoned all mercurials in constipation some years ago. My only exception is, the use of small doses of calomel (1-10 or 1-20 of a grain) in the constipation of infants, when dieting does not overcome the trouble.

The patient is not being cured of his constipation unless he finds that as time goes on he can do with smaller doses of the cathartics taken at longer intervals. Until he can observe this result, there probably is something radically wrong with his diet, and then a close study of his habits of eating and drinking becomes imperative.

There is a long list of cathartics that will answer for occasional use, although not suitable for curing constipation. We might include in this list castor-oil, croton-oil, the epsom, rochelle, and glauber's salts, jalap, calomel, blue mass. The faith of the laity in castor-oil and epsom salt (shared to some extent by the profession) has always had an amusing side to me. Why people will swallow such nauseous doses when equally good and perfectly palatable remedies are available, is "one of those things that no fellow can find out," to quote Lord Dundreary. It suggests the flagellants of the Middle Ages, who flogged themselves for their sins.

There is one other remedy worthy of note, namely, liquid paraffin. While being sold under various proprietary names, it is simply refined liquid petrolatum freed from all irritating substances. It acts solely by lubricating the bowel and softening its contents; apparently, none of it being absorbed. I have had good results from it, when it was taken long enough—say, daily for three to six weeks; otherwise, the constipation was relieved only temporarily. There is only one fault to be found with it: if retained in the rectum too long, it will ooze through the tightest sphincter and soil the clothing.

A Sermon for Young Doctors

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DO NOT misunderstand me. No physician is going to underrate the importance of producing and operating through favorable mental states in his patients. Broadly, it is true that a physician must take into a sick-room an atmosphere of quiet confidence. One who would break in upon a patient with despondent prophecy or a grim determination to make him know the worst at once and have it over with would soon make himself so utterly useless that he could not hold his practice, even though he knew all the medicine that ever was or could be. But, every doctor is fully—instinctively—aware of that, and, so, acts upon it. Mental states have much to do with forming or deciding bodily states, if they are properly created, with knowledge behind and intelligent purpose before them. I may go further and say that no method of practice is now complete that does not take into consideration this phase of suggestion. Still, no one not completely qualified to practice medicine should be permitted to employ so intimate an element, because in unqualified hands it becomes almost certainly an agent of the gravest danger. Suggestion is operative upon the general physical structure through the nervous system actuated by the brain-ganglia, and, when intelligently excited, with definite knowledge of the processes to be set up and the precise effects desired, it may become an agent of enormous potency for good.

To be a thoroughly successful doctor, you must be optimistic. Educate the will-power so that it will focus the thoughts upon the bright side of things and upon objects that elevate the soul, and thus form a habit of happiness and goodness that will make you rich. A doctor should be cheerful and possessed of humor. Humor is one of the most human of qualities, linking itself so closely with sympathy and pathos that you seldom find them separated. The fountains of laughter and tears lie very close together. Invalids always are helped by a call from a smiling, hopeful doctor. Dr. Oliver Wendell Holmes said: "A smile may be worth five thousand dollars a year to a man." It often is worth that much to a doctor, and is of incalculable value to many a despondent patient.

Cheerfulness is a never-failing source of influence. It is a nerve tonic and stimulant. It cheers the timorous, encourages the despondent, and comforts the despairing. The hopefulness and optimism of the physician do much more than cure feeble minds and faltering wills—they assist the cure of every disease he may encounter. I am not sure but that his cheerfulness, hopefulness, and optimism produce a confidence and belief in his powers that effect a cure quite as much as any means that he may employ. Alteratives for the mind generally are more important and efficacious than are alteratives for the body.

Coleridge considered him the best physician who inspired most hope. The patient should receive the full benefit of hope. If he be a man cast in common mold as regards love of life and dread of death, expression must never be given to our fears in any form. The bare suggestion of death to such a man may turn the scales against recovery. Fear being recognized as a powful cause of disease and a direct and great obstacle to recovery, a wise physician will exert himself to prevent or antidote its influence. To eradicate fear and stimulate hope is, to avert disease, to shorten its duration, diminish its virulence, and promote recovery. There is a mental and moral sanitation ahead of us that is, perhaps, as valuable and desirable as are all our quarantines, inventions, experimentations, and all microscopic search for physical causes of disease.

We all recognize this in part. We have much more to do than to administer drugs or carve up living tissue. Show me a good farmer. Such a one is not "skinning" his land, he even is not drawing out of it what he puts in. He is doing more. He always is adding to the value of his farm, to its fertility, to its tools and buildings, and to the improvement of its stock. If he leaves his farm to his boys, they may do better with it than he could. Whoever takes it after

him, the community is going to be richer for his having cultivated it.

The good business man is adding to his capital, increasing his plant, and extending his enterprise. He not only must have profit, but he must leave a good part of the profit in the business. The great corporations have to do this or go to ruin.

The same is true of the doctor. You must put more into your business than you take out of it. You should not be a hermit in the midst of millions, away from the village, country, state, nation, universe. A hundred ties bind you to benefit and be benefited by the rest. So, you are bound up with the profession from the first day you enter it. You should join and take part in your local, state and national societies. You should give the profession the benefit of your discoveries and experiences. As there is a political, so there is a professional citizenship, meant to improve the individual, increase his knowledge, compare experience, adjust mistakes, and learn modesty. We were not made to be alone. Capsulation kills the efficacy of bacilli and of men equally, and the interests of a profession or a political commonwealth are not safe except in the application of a universal democratic spirit. Nor can results be obtained except by the altruistic cooperation of many.

You can not know the real value of your work. The brains and the toil of unthanked men of bygone years are involved in it. Each of us shares an "unearned increment" that every honest doctor has left behind him. Each of us should hand on something to posterity. You must do better than the fair terms of your contract with your patient call for. You must, on occasion, throw in a few extra moments of time; you must put good-will into your work; you can add humanity and friendly words. Because zealous men who have preceded you put more in their work than they took out of it, you are better prepared to enter upon your life-work.

Progress and civilization have come, because of the great lives of heroes, masters, inventors, teachers, statesmen, and the vast accumulation of the deeds, the customs, and the spirit of an unthanked and humble multitude of lovers of science, of justice, mercy, and truth, who, like candles burning in the night, have simply given their lives to shine as far as they could make them reach. All these have contributed life and knowledge, in order that the successive ranks of men might know more and live more humanely forever. All these did more than to live—they left a surplus behind them.

Before our generation lies a list of great undertakings of the value and profit of which for ourselves we cannot be sure at all. Our cities must largely be built over again, and built better; overcrowding must cease. The children of all must be brought, somehow, into wholesome touch with the soil. Preventable diseases must be stamped out. People must be taught how to live; and who, if not members of our profession, is to do this?

If I were to preach a sermon today, I think I should choose for a text that inquiry which Cain coupled with a lie and addressed to his Creator: "Am I my brother's keeper?" And, if I had the power of argument and the eloquence in keeping with the sincerity of my conviction on the subject, I think I could satisfy you that you are your brother's keeper and that many of your brother's ills and afflictions should receive your active and earnest consideration.

If tuberculosis is better known today, that is the outcome of the work of many, and for centuries. If it, and other preventable diseases, both those of the body and of society, are to be exterminated, it takes the sympathy and labor of more than one person, one society, one town, one country. It demands the cooperation of all and everyone. Your ears should be taught to listen and to know the dignity of moans and coughs and stifled cries—your eyes should behold intelligently and pityingly the shriveled skin of emaciation, the hungry look, the suppressed tear—your hand should know how to feel the pulse of him in the stricken, lonely dwelling and that of society, besides. You should learn how the other four-fifths live and how they sicken and are crucified and die. You should learn something, too, of the interdependence of the privileged and the unfavored, and of the impropriety of the differences distinguishing between what should never have been permitted to be called the upper and lower classes.

You see, I not only am wishing you to be great doctors, but, I am urging you to be great and good men. I assert that what the community today most lacks is the individual instance of virtue of whom the world may say with Shakespeare, "This was a man"—a noble, virile type, the living exem-

plar of that high conscience, that stainless honor and incorruptible love of truth which alone proclaims the Creator's image.

As members of a noble profession, you should add your leaven toward improving the conditions of society; you should emerge from the seclusion of the office and study and remember that you are not to be relegated to a limited space about your office or in your laboratory, but, should stand as a living power in the community, bound to it by indissoluble ties of sympathetic interest, and, through force of character, supplying the deficiencies of others.

No one could wield a stronger influence in the community than we could, if we would but exercise it, and it is our duty by precept and example to stand for personal and public honor and honesty and for the enforcement of law and for good government.

You should interest yourselves in the politics of the city, the state, and the country. I should say that a man who is not interested in his community is incomprehensible. Aristotle called a man a political animal, that is, one that feels its intellectual gregariousness and coordination.

Take part, then, in honest politics, add your share to the attempts of those who strive to make modern politics honorable again and consistent with the laws of private morals. In every walk of life, we need men of staunch courage, God-fearing (or, better, God-loving), honest men of strong personality, to stem the tide of shuffling weakness and give honesty and tone to politics, trade and society.

We need men in whom are combined the greatness of real goodness and the goodness of real greatness. This union of the mental, moral, and physical into a life of admirable simplicity is what we must admire in men.

"God give us men! A time like this demands
Strong minds, great hearts, true faith, and willing hands—
Men whom the lust of office does not kill,
Men whom the spoils of office can not buy
Men who possess opinions and a will.
Men who have honor, men who will not lie,
Men who can stand before a demagogue
And damn his treacherous flatteries without winking;
Tall men, sun-crowned, who live above the fog,
In public duty and in private thinking
For, while the rabble, with their thumb-worn creeds,
Their large professions and their little deeds
Mingle in selfish strife, lo! freedom weeps;
Wrong rules the land and waiting justice sleeps."

Falsehood disintegrates and breaks down the tissues of society. Truth binds men together and reinforces the social texture. Honesty builds up and dishonesty subtracts; therefore, the dishonest cannot endure. Cruelty destroys and kindness saves. Impurity is a poison sapping life, but, pure hearts and pure homes create new vigor.

The ethereal forces war, to undermine and bring to death the things and the men who bring no positive contribution toward the momentum of civilization. Such is the inexorable law of existence.

These are some of the important problems for you and for me and other men in every walk of life today.

Who is best of all men? What kind of man would one like to be? What kind of sons and daughters would we desire the very best conceivable? I have a picture in my mind of one who aims with all his might to yield an increase out of his life. The man of my vision is not working alone for pay or honors or fame or thanks and appreciation or even for love; this man is working and living to give love and give life, in every form, by which a strong nature can express itself.

We want a better type of man than the present yearly average. What the world is looking for is a superman. The present generations serve to bridge over to the coming of this superman. But, what better superman can there be than the man who is just, faithful, industrious, generous, friendly, fearless, bound to do right, devoted to the welfare of mankind? He has already come, he is here. Only give us more men and women of this type. Put more supermen of this type, as we now have some of them, into medicine, law and the other professions, into factories, banks, offices, into legislatures and congress, into the chairs of mayors, governors, judges, presidents, and all business will become a form of religion and all work will be ennobled. Fill the homes of the people with women of this type and the education of the multitude will soon be more complete than the education of the favored few in great universities has ever been.

In Brief

Now, gentlemen, briefly, to succeed, in addition to following the advice I have given you, you must be prepared to seize and improve every opportunity that comes to you.

More important, even, is the ability to see the change coming. Do not be afraid to outgrow old thoughts and traditional ways of practice. Be courageous and independent and dare to think and practice on new lines. You should not hesitate to change your methods, if you are sure that you see a better way.

The object of life is, to grow. Whoever is satisfied with everything that he does has reached the culminating point—he will progress no more. The art of seizing every bit of knowledge, every scrap of information, no matter how insignificant it may seem at the time, and to lay hold of every opportunity and every occasion and grind them all up into experience can not be overestimated.

You should welcome competition and should have enough of it to keep the edged tools of your brain bright and sharp. There is no possible success without some opposition as a fulcrum; force always is aggressive and crowds something; it gains in strength by overcoming resistance.

One of the greatest elements ot success is your firm faith in your ability to succeed Believe firmly that, if you do not find a way, you can make one and will triumph. Learn to look at the bright side, keep the sunlight of living faith in your hearts and never let the shadows of discouragement and despondency fall upon your path.

You go from your college equipped to do service to humanity and, indirectly, to yourselves. Let it never be said of you that your highest ambition implies the reverse of this statement or that you suffer the shadows of your own personality to obscure the clearer light of professional duty and the nobler impulses which should actuate those who aspire to treat the sick. And be not dismayed by the vicissitudes and disappointments of your high calling; remember "King Henry IV":

"Yield not thy neck
To fortune's yoke, but, let thy dauntless mind
Still ride in triumph over all mischance.'

Every young man beginning life in earnest naturally feels discouraged at times; but, if he is made of the right kind of stuff, he will fight off the feeling and work and wait. No one ever is beaten until he is discouraged. The man who can be easily discouraged or turned aside from his purpose, the man who has no iron in his blood never will win. You will have to make your own path in the practice of medicine. You must play the game alone.

No man ever sailed over just the same route over which another sailed before him; every man that starts on the ocean of life arches his sails to an untried breeze. As Coleridge's mariner, "he is the first that ever burst into that lonely sea."

Unless you determine to achieve those things that are absolutely indispensable to success and sacrifice all the little trifles that are nibbling away at your precious moments, you will accomplish nothing worthy of a great life.

Work, play, study, whatever it is; take ahold at once and finish it squarely; then to the next thing, without letting any moments drop between. Tomorrow-men never do anything. It is the today-men, the now-men who accomplish the great things of the world.

Let me caution you against the narrow jealousies, the envious moods and petty rivalries that not infrequently mar the practice of your exalted profession and are a reproach to the heart and intelligence. They not only impair the physician's dignity and his usfulness to society, but, being readily perceived by an observant laity, prove detrimental to the general prestige of the medical fraternity. "There is glory enough for all," as Admiral Schley magnanimously signaled, and the encouragement and maintenance of a generous *esprit de corps* should be your constant pride.

Let me remind you that the roads to the great future are many, while the ideal is one. We can always prove that we belong to the great family of idealist professional men, scorning low motives, despising mean measures, to our honor and that of the profession and of the country.

Let each one of us be one of the wheels of the chariot, with the ambition to land it and ourselves on the summit. I wish I could impress every one of you with that ambition, for, the road before you is steep and demands strength of character and an idealistic mind, perhaps more at present than ever before. What mankind requires still more for the future that is sure to come is, confidence in, and hope for, the future.

It is the liberal professions with their intellectual and moral outlook afforded by the culture both of mind and heart that first will turn the eves to the consummation of that ideal. We sometimes may slip, shadows may obscure our path, the boulders

may bruise our feet, trials we may have and tribulations sore; but, I say unto you, if we stand on the rock of principle and do our best, whether rich or poor, so that the world can say of us, "This was a man," our life will have been a glorious success.

Let me urge you, then, to begin now, in the first days of your practice, to carve out for yourselves pure, honest, and industrious lives; for, we all do carve as statues evermore.

"Therefore, O friends—in this your earnest youth,
When loftiest visions of the future stand
Throbbing before your sight, note every line
In their high-thoughted feature, and so carve
The grand hope into form, that it shall stand
Through all the years majestic 'fore your sight,
As a white statue from its pedestal
Smiles on the sculptor whose large skill has wrought
Thus into wondrous symmetry the thought
That erst lay in his soul.

Dig deep for truth,
And, when your hands have struck the hidden vein,
Its waters shall gush up to meet your lips
With a most tempting loveliness, whereof
Your souls may sate their thirst forevermore.

So live, and ye shall flourish; and, perchance,
When your green springtime, with its buds and blooms,
Passes to the ripe autumn, there shall be
Such mellow plenty of rich-flavored fruit
That the old epicure—the world—shall bend
And stagger 'neath her treasures, as a vine
Totters beneath its luscious load of grapes.

So live, and ye shall flourish, and if all
The fibers of each heart do cling to heaven;
If all your wealth of sympathies be flung
Above the skies—above the burning stars—
Above all glories up to our own God,
Then shall your souls have prescience of all time
And stand among the angels.

And smiles shall be about you, and warm tears,
And gladness as the sunshine. You shall rest
Your love upon all children, and gray hairs
Shall thrill your hearts like music.

Therefore, O friends, in this, your earnest youth,
'Excelsior' ever be upon your lips;
Tell out your message boldly in the ear
Of the great world and from the dark eclipse
Drag forth the hidden light. Then ye shall hear
The harmony of angels and the strain
Of the High One's own choristers; and then
The voice ye breathe unto the sons of men
Shall catch the music of the other sphere
And back to your own hearts return in love again."

A Discussion of Compulsory Health Insurance

By E. S. HASWELL, M. D., Albany, New York

EDITORIAL COMMENT.—The subject discussed by Doctor Haswell is of vital interest to physicians, as well as to those whom the movement of compulsory health insurance is intended to benefit. The serious point is, that the physicians' interests are not safeguarded, or even considered, in the proposed legislative bills. It is absolutely necessary that all medical men arouse themselves and take active steps in opposing legislation that is vicious and injurious.

DURING the period of lull between legislative sessions, is the time when we can most dispassionately consider tentative legislation. At such times, our judgment and reasoning are less likely to be biased by partisan enthusiasm.

A review of the argument which took place in the State of New York, during the winter of 1917, relative to compulsory health insurance is most timely. This argument was a result of the proposed act introduced in the New York State Senate.

Six classes were concerned, namely: (1) labor, that is, the working people who receive $100 or less per month; (2) capital, that is, the employer; (3) the insurance companies; (4) the state; (5) the taxpayer; (6) the medical profession.

The opponents contended as follows:

1. That it would limit and interfere with the inalienable right of American citizens to exercise their free judgment and thought.

2. Regarding the individual: That it would be hiring a physician for a family or permit only a limited number of physicians from whom the family or individual might choose a medical advisor; and, that this was limitation of free will. The individual would be

forced to contribute toward something which he might not desire. The State could underwrite, not only the regular insurance carriers, but, also the fraternal and union systems. If labor were compelled to carry state insurance, there were many who could not afford to maintain their fraternal and union insurance; so, this would be a direct blow at fraternal bodies and unionism.

The state would be assuming guardianship over the individual who would no longer be a citizen but a subject. It would discriminate between classes of labor, dividing it into those who receive $1,200 or less per year and those who receive more.

Capital would be required to contribute toward the health of an employee and his family, irrespective of the conditions present; and, there are many forms of disease which could be contracted without any direct relationship to occupation.

3. The State: The proposed plan was that for those compulsorily insured 20 percent of the premium should be paid by the State, and 40 percent by the employer, and 40 percent by the employee. Figuring this premium on a 4-percent basis of the average salary, that is, $500 of the approximately insurable people under the act, it would have amounted to about $140,000,000 per annum. Of this, the State pays 20 percent, or approximately $28,000,000. The difference between $28,000,000 and $140,000,000, that is, $112,000,000 would have been equally divided between employer and employee; which would have meant that each would have contributed about $56,000,000.

That this $112,000,000 would be equally divided between the employer and the employee, was apparently true. In reality, it was a fallacy, because the employer or capitalist, in order to compensate himself for the 40 percent tax levied on him, must raise the selling price of his wares. The jobbers and retailers would have added this to their selling-prices, so that the employer's 40 percent would ultimately have been paid by the consumer. If the consumer was one of those receiving less than $1,200 per year, he would have been paying a double tax for the same purpose, that is, he would have paid not only his original 40 percent, but, also, through the retailers, the employer's 40 percent. Ultimately the consumer would have paid 80 percent, or $112,000,000—enough to build a Barge Canal every year. The tax and rent-payers today are contributing towards the support of the dependent and semidependent people, inasmuch as part of the taxes are used for the maintenance of the state asylums and supporting municipal charity boards.

The annual budget of the State of New York is approximately $65,000,000. The state's contribution, under the proposed act, would have amounted to almost 50 percent of the present budget, thereby increasing the state's budget by $28,000,000 or a total budget of $3,000,000. This again was class distinction, for, it would have been taxing the independent people for those who are dependent or semidependent.

4. The taxpayer: This extra $28,000,000 that would have been added to the budget of the state would have been paid by the rent-payers; but, more than this, the employer and employee each were asked to contribute about $56,000,000, or a total of almost twice the present budget of the State of New York. An increase in the taxes would necessarily have followed; thus higher rents; so that the laboring man would have been paying his original 40 percent, the increase in the retail price of an article manufactured under this system, and the increase in rent or taxes—a triple taxation for the same purpose.

The proposed plan for the administration of health insurance appeared to be unwieldy, complicated, and affording many opportunities for political intrigue and monopoly of practice.

A limit would be placed upon a certain class of practice, as the physician would be allowed only 500 insured persons with the dependent members of their families, or 1,000 individuals receiving $1,200 or less a year. This restriction would act indirectly as a limit to a physician's income.

It was implied by the proponents of the bill that limitation produces efficiency. Limitation of business is not conducive to advancement and efficiency. If legislation of this type were in force at the time The American Telephone and Telegraph Company was organized, that is, if a limitation had been placed on the number of telephone-subscribers, number of employees, and amount of material, would it have developed its present high state of efficiency? If such restriction had existed, we should today be in the same state of telephone service as that of England and other Euro-

pean countries prior to the present war. In this country, there is a telephone to every ten inhabitants, while in European countries "not one person in a hundred has a telephone."

To be consistent, argued some of the opponents of the bill, the railroads should be limited in mileage, number of passengers, and amount of freight. Had all business been limited, there would have been no such organizations as The Standard Oil, United States Steel, General Electric, American Locomotive, and numerous other highly efficient and progressive organizations, who now give employment and are paying a high scale of wages to hundreds of thousands of men.

If a limitation had been placed upon the number of patients that a physician might treat, would Ochsner, Murphy, Crile, Howard Kelly, and other famous physicians and surgeons of the country have obtained that high degree of efficiency which they have so ably demonstrated? Could the Brothers Mayo, the world's famous surgeons of Rochester, Minnesota, have developed their wonderfully adequate facilities and marvelous efficiency for handling their immense volume of surgery if they had been limited to 500 families per year? Has a small corner store the efficiency that the large department store possesses? Or a basement coal shop that of a large coal yard?

We find the following on page 8, paragraph 15, in the printed copy of the proposed law as introduced in the New York state senate:

"A panel of physicians to which all legally qualified physicians, surgeons, hospitals, dispensaries, and associations of such physicians and surgeons shall have the right to belong, and from among whom the patients shall have free choice, subject to the right to refuse patients as provided by regulations made under this chapter; provided that no physician on the panel shall have on his list of insured patients more than 500 persons with the dependent members of their families, except that for every insured person with no dependents he may have one additional such person."

The interpretation of this seems to imply that, if a physician had his full quota of 500 families and some other family requested his services, they would be barred by law from obtaining the man whom they desired. Is this free choice?

On page 9, lines 5 to 8 of this proposed law appears:

"2. Legally qualified physicians on salary and in the employ of the fund or society, among which physicians the insured persons and dependent members of their families shall have reasonable free choice:"

Did you notice the words "reasonable free choice"? It reminds me of the fifty-third card in the deck, the one we call the joker. A definition of the word "reasonable" used in this connection would be largely one of opinion in individual cases and be capable of having a wide range of interpretation.

On page 10, lines 2 to 5 of the proposed law appears:

* * * "The aggregate cost of treatment and supplies under this section shall not in any one year exceed 50 dollars for an insured person and the dependent members of his family."

"Shall not in any one year exceed 50 dollars!" The cost of treatment of one case of typhoid fever, including a nurse, would be more than 50 dollars. If some member of the family were ill for ten weeks with heart disease, the total cost of that case, including physician, nursing, drugs, and incidentals would be considerably more than 50 dollars; and if some other member of the family became ill later on in the year, would they be deprived of the sick benefit? Is this fair? I deduce from this that a family is entitled to no more sick-benefit than this one case.

Must democratic America turn to monarchical forms of government, such as Germany and Austria, for an example regarding the legislation of health insurance?

THE day when he conquers fear, when he decides that he can hold his own with anyone, is a red letter day in man's life.—Darwin P. Kingsley.

The General Practitioner in His Relation to Practical Psychiatry

IV. A Few Remarks on Psychanalysis

By LEON E. DUVAL, M. D., Washington, D. C.

Government Hospital for the Insane, Washington, D. C.

EDITORIAL COMMENT.—Doctor Duval very kindly has offered to answer any questions regarding problems, treated in his series of articles of which this is the last one, that may be asked of him by readers of "Clinical Medicine." Such letters may be enclosed to the Editor and we will forward them to Doctor Duval. His replies will be published from time to time in this journal.

I HAVE been somewhat in doubt as to what subject to consider in this, my fourth and final, article of this series. This is not because of lack of material, for, I have not touched upon functional psychoses, the senile and arteriosclerotic psychoses, the alcoholic psychoses, the toxic psychoses, besides a number of other comparatively common mental ailments. The question was: What can I bring to the reader that will stimulate his interest in this important subject? After consulting the Editor, I decided to touch in a brief way upon the subject of psychanalysis, because many of you in general practice either do not know anything at all about the subject or, if you have seen allusions to it in your medical reading, probably have had a very hazy idea as to what was meant by the term.

In an article of this length, I can touch only upon some of the more important points, and only can hope to give sufficient insight into the subject to, perhaps, stimulate the reader to further research into the matter. To those of you who may wish to pursue a course of reading on this topic, I would recommend the works of Freud and Brill, besides some of the simpler expositions of the problem by more recent writers.

As a new and radical step in mental medicine, psychanalysis has received the revilement and abuse that attends the announcement of every new and radical discovery. Some have prophesied that this teaching would soon go out of existence; but, it bids fair to assume a permanent and important place in the armamentarium of the psychiatrist. It has earned a right to this place by remarkable and lasting results in cases that previously had baffled the skill of those engaged in the treatment of mental ills. Its opponents have not been able to bring any really valid arguments against it and consequently have resorted to ridicule and satire. Even such a writer as Francis S. Dercum, in his recent book on suggestive therapeutics, endeavors to influence his reader against psychanalysis by resorting to ridicule, and, yet, he does not give a single sensible argument against it.

One reason why psychanalysis has not as yet come into its own with certain psychiatrists is, the misconception they have of Freud's theories and of what really constitutes psychanalysis. They misconstrue the term "sexual" as used by Freud and assert that he refers all of the neuroses to sexual trauma while, as a matter of fact, Freud himself long ago abandoned this idea. By the term sexual, we do not necessarily refer to the act of sexual congress. As used by Freud, "sexual" includes what might broadly be included under "love," "l'amour" of the French and "eros" of the Greek. It is a broad term and signifies the emotional affect which we have for those in whom our interests are centered.

While psychanalysis is a matter of definite value in psychogenetic disorders, it is just at present in a somewhat chaotic state, because there is considerable difference of opinion among psychiatrists as to the mental process operating in certain mental disorders and as to the proper method of approach for treating them. Among psychiatrists, there are two schools—those for and those opposed to psychanalysis. Then among those who favor psychanalysis, there again are two distinct schools, namely, those who, with Freud, tend to consider the neurosis always to have a sexual basis, while the others are inclined to think that at their basis other elements are at work,

However, I shall not discuss these two schools, but merely touch upon the subject from a practical standpoint.

The Method In Psychanalysis

The technique of psychanalysis, briefly stated, is as follows:

First, a complete history of the individual is obtained—and, by complete history, I mean that the patient's entire life, surroundings, family and social relations, occupations, special tastes, associates and accomplishments, in fact, every possible detail of the patient's physical and mental life is carefully recorded and studied. This is accomplished while patient and physician are getting *en rapport*, for, it is absolutely necessary that the patient have full and complete confidence in the physician, to such an extent that he or she later may feel free to confide in him the most intimate and painful details of his or her life. Unless the patient is willing to cooperate to the fullest extent with the physician, this mode of treatment is absolutely of no use.

The history having been obtained, the subsequent course of the analysis depends much upon the individual case, the makeup of the patient, and the personality of the analyst. Dreams, if the patient can be trained to record them faithfully, afford by far the best clue to his psychic life. The more important dreams are selected by the analyst and carefully studied with the patient's aid. Occasionally the meaning of a dream is fairly apparent, viewed in the light of our previous knowledge of the patient. More often they have no meaning until interpreted by the patient in terms of his own individual association with their various details. To illustrate:

One of my patients dreamed that he was in prison and that his mother came and gave him a loaf of bread. Out of the loaf of bread jumped a huge rat, and this, with the aid of a prison-physician, he endeavored to kill, but without success, until a second prison-physician came; then, with the latter's help, the animal was quickly dispatched. This patient had but recently been sent to this institution from prison. Now unless one knows something about the patient, this dream has little meaning. The man had been physically ill in prison and recovered just before he came here. The first part of the dream, perhaps is comparatively simple. Bread is a symbol of life, and the patient's mother giving him bread symbolizes, of course, that his mother gave him life. (This patient had a very strong attachment for his mother.) The rat signified the physical disease, which the patient and first prison-physician had been unable to deal with successfully. The dispatching of the rat by the aid of the second prison-physician was symbolic of the successful treatment of the disease by the second physician while the patient was in prison.

This is a comparatively simple interpretation of the dream, and doubtless there are other associations and meanings that might be discovered by prolonged investigation.

This will give an idea of what I mean by dream interpretation. By thus following out many dreams, we find associations with things and incidents that in his waking life the patient has forgotten, but which can be recalled by means of associations. We often can piece together the results of the interpretation of many dreams and construct an orderly sequence of events, beginning with the exciting causes of the mental discomfort and leading up to its culmination in the symptoms for which the patient seeks relief.

To interpret the patient's dreams and other thought-pictures, we must understand something of the subject of symbolism; which, though, is altogether too large and complex a subject to even be touched upon in such a limited article as this.

Besides the interpretation of dreams, we also use the "method of free association" and in suitable cases the method of word association. We also study the patient's imagination, his fantasies, and day-dreams, in fact, his every peculiarity, until we are able to construct a picture of his entire psychic life from childhood up to the present.

The Therapeutic Uses

Now let us speak of the uses of psychanalysis as a therapeutic measure. Principally, it is used in the so called functional diseases; hysteria, anxiety-neuroses, compulsion-neuroses, neurasthenia, certain cases of manic-depressive insanity, an occasional early case of dementia præcox and the "psychogenic depressions" being practical examples. That is to say, we employ it in those cases of mental disease in which the basis is found in disturbances of the psyche, but which have not yet progressed to an irremediable stage.

These psychogenic disorders, as I have already said, have for their bases some dis-

agreeable emotional experience to which the patient was unable to make a satisfactory adjustment, while, as the time went on, this experience—though forgotten by the conscious mind—lay buried in the depths of his unconscious mind, where, albeit buried, it by no means was inactive. The experience kept cropping up in the unconscious mind, in the form of symbolic representations or of reactions that might be traced to the individual's mental associations with certain details of the original disturbing experience. These manifestations make up the symptomology of the diseases which may be treated by psychanalysis. The anesthesias, paresthesias, paralyses, and various other bodily ailments of, for example, the hysteric, are traced by the psychanalyst to the individual's repressions of things connected with his mental conflicts or, at least, to the results of these repressions.

To give an example: A girl addicted to masturbation may brood over her habit, believing it a terrible and unforgivable sin, or else be frightened by her belief of the terrible results of onanism attributed to it by medical quacks or ignorant people. Yet, she is unable to resist her autoerotic impulses, and there is a strong conflict between her autoeroticism and the desire to discontinue the habit. The result may be a hysterical paralysis of the arms, and this will serve to prevent her from performing the act that led to her mental conflict. Cases such as this by no means are uncommon in the practice of the psychanalyst.

Of course, the patient does not realize the cause of the paralysis. If questioned as to her habits, she will deny any sexual irregularity. That is the very thing that she is trying to suppress; and she can not overcome her mental repression and confess the habit. The analyst continues to study the patient carefully, analyzing her dreams, gets as many of her mental productions as he can; and thus usually will find scattered details suggesting the basis of her mental conflict. Even if he can jump at conclusions, he does not bluntly say to the patient: "I believe that you are addicted to masturbation and that your worry over the habit is the foundation of your troubles." Rather, he lets the patient explain her dreams and by judicious questioning and suggestions leads her up to the point where she voluntarily tells him about her onanism and reasons out, by her own effort, the connection between the onanism and her paralysis, discovering the connection between her repression and her mental conflict, until she sees how they are related to her symptoms. Through the self-understanding so gained, there no longer is room for the conflict. If the analysis has been thorough and the patient gains a real understanding of her case, she usually is fortified against a recurrence of a similar disorder.

This is a comparatively simple case, the kind in which the embryo psychanalyst meets his first successes; but, many of these cases are of long standing, with strong repressions, the symbolisms complex and not easy to unravel, and an unwillingness on the part of the patient to reveal the disagreeable details of her mental conflict. In these cases, the analysis usually is of little value either to the patient or the analyst.

The fact that the mechanism of an individual's conflict is clearly worked out does not necessarily mean that a cure will be obtained or that, if there is any relief, it will be permanent. Success depends upon many factors, chief of which are the stability of the patient's makeup, the thoroughness of her understanding of the mechanisms of her psychic disturbance, her willingness to be cured, the thoroughness of the transfer, and the analyst's own ability to put his sympathies and himself in the patient's situations, so that he can gain a clear understanding of everything connected with the case. The patient's real wish to be helped has much to do with the final outcome.

Take, for example, a dementia-præcox subject in this hospital. This man was an intelligent, well-educated athlete whose psychosis occurred shortly after the dramatic announcement of his engagement in the newspapers at the time he started for the Mexican border. The psychosis, at first atypical, soon developed into a typical catatonic dementia præcox. Certain features of his case led the analyst to believe that the case might be benefited by analysis. After months of patient work, very little practical good had been accomplished by this method. Then the visit of his fiancée brightened him up so remarkably that, while in her company, he presents an absolutely normal appearance; but, as soon as she leaves him, he relapses into the catatonic state. The analyst still is hopeful of his ultimate recovery, although the other members of

the staff give a poor prognosis, because of the fact that the patient apparently does not care to recover. He has been able to work out some of his difficulties, but, he is too indifferent as to what is to become of him later, and it seems that, no matter how far he recovers, he sooner or later will relapse into his psychosis, because in this state he feels perfectly comfortable, while the effort to adjust himself to a normal state will require more mental energy than he cares to put forth.

This is an extreme case, of course, but, in the hysterias and psychoneuroses, we often find patients who relapse after treatment and apparent relief, because the psychosis is more comfortable to them than the effort at adjustment to the normal state. Such cases make up the failures of the psychanalyst and can not be blamed upon his lack of skill; for, as said, unless a patient is really desirous of regaining his normal state, there is little hope of permanent relief.

Some Drawbacks

Psychanalysis is not a measure that every physician may employ. The analyst is born, not made. While he must acquire the necessary technical education, the personality, sympathetic understanding, and other qualifications must be inborn, as they can not be acquired. Psychanalysis is not adapted for use by the general practitioner. Even if he is conversant with the method employed and has the necessary personality, the time-element militates against this mode of treatment. To be successful, one must spend at least an hour every day with the case for periods of weeks and months, sometimes years, and, unless one can afford the financial losses which accompany the limited number of patients which the analyst is able to see, he is forced to leave this work to the specialist.

However, the practitioner should study psychanalysis for the insight it gives him into the lives of all of his patients, whether theirs be mental cases or not. It enables him to appreciate much that otherwise he would miss entirely, and puts him in closer *rapport* with men and women generally.

Psychanalysis is not without its dangers. The patient may be injured psychically by injudicious application of this procedure in cases in which it is not appropriate or by its use by those who only partly understand it and who, therefore, are liable to start the patient on the road to the working-out of his mental conflict and then be unable to carry him through to the end. In this way, it is possible to inflict a lasting injury. The beginner in psychanalysis should select his cases very carefully, taking care that he approaches such of them as he is likely to be able to understand thoroughly and in which he will not do any harm if he fails to relieve them.

Perhaps by this time the reader is asking, "Then, why use psychanalysis at all, when its use is so limited?" But, this is not an argument against it. Not every surgeon can do brain surgery, and there is only a case here and there in which its results are favorable, yet, none of us will deny that brain-surgery is a useful specialty.

Psychanalysis has as its best argument the lasting results it gives in suitable cases. If a patient subject to manic-depressive insanity can be treated by this method, it is possible in certain cases that future attacks may be averted. In the compulsion- and anxiety-neuroses, many instances of entire relief are on record. Hysterical cases also often are greatly benefited by it.

The "why" of psychanalysis briefly is this: The victim of mental disease with a psychogenic basis is suffering from a failure to adjust himself properly to some situation past or present, and this failure of adjustment has thrown out of alignment his psychic mechanisms. These mechanisms are in need of readjustment, but, the patient is unable to do this, because he or she does not understand the real basis of the trouble.

Psychanalysis has for its primary purpose the reconstruction of the psychic process, this reconstruction being done by the patient himself, under the guidance of the analyst. And, when the reconstruction is complete, the patient has full insight into himself—and, presto, the mental disturbance which was the result of the maladjustment of the mental mechanisms disappears, to give place to a normal adjustment, a self-understanding which guards against a failure of the adjustment in situation, similar to that in which the mental conflict, with its resulting disturbances occurred. That is to say, the patient's entire psychic life has been reviewed, so that he gains a realization of the "how" and "why" of things connected with his psychic life. With

an understanding of self established, if the patient is stable, there is no room for future lack of self-adjustment, and the individual meets future situations in such a way that they will be unable to exert any untoward effects upon his psychic life.

I have discussed this subject in a haphazard manner, touching only a point here and there. Perhaps I have failed to make clear its meaning, because it is such a large subject—one which requires years of study before we can talk about it with any degree of authority. My only reason for touching upon this subject at all has been in the hope of stimulating the interest of the reader in this and other departments of mental science. The physician who neglects this science is doing serious harm to his clients, because he cannot treat them for any bodily ill in a scientific manner until he understands the mind and its close interrelation with the bodily functions.

The Third Arm

A Discussion of Urinary Findings

By B. G. R. WILLIAMS, M. D., Paris, Illinois

Director, Wabash Valley Research Laboratory.

EDITORIAL COMMENT.—This is the second article by Doctor Williams concerning the possibilities of laboratory investigations as a fertile aid to diagnosis. The preceding paper was published in the August issue, page 560.

EVEN as the laboratory aids have proved themselves the physicians' third arm in diagnostic difficulties, so may the uranalysis be regarded as the index-finger of that arm. I assume that readers of CLINICAL MEDICINE understand fairly well the meaning of albumin, glucose, and casts, and, so, omit discussing these and rather will pay particular attention to those tests that commonly are regarded as of minor importance. For, it certainly is true that the average man has not yet grasped the fact that some abnormal reaction or the finding of indican, acetone, urobilinogen, renal cells, and so on, is of much greater importance than the detection of albumin or identification of renal casts. And why more important? Simply because the finding of casts usually gives us merely an insight into the prognosis, while the finding of indican supplies a definite therapeutic indication. In the same way, glucosuria damns, but, acetonuria may save; leucin crystals foretell black crepe, oxalates, only the red danger-flag.

However, let us look for a moment into the question of collecting, preparing and preserving samples of urine—and these rules not only hold for those cases in which the specimen is mailed to an expert for a complete study of it, but, also where the physician himself desires to make a superficial examination somewhat later. For, it certainly is true that any old sample of urine collected at any old time and under any old conditions means, in the end, an unprofitable examination.

If possible, the 24-hours output of urine should be saved and measured, best accurately, but, at least, approximately. If this 24-hour amount has been properly preserved (as directed below) the portions may be mixed and then a sample be taken from it. If not, the urine should be rejected and a fresh morning sample taken as follows:

Into a clean, 2- or 3-ounce prescription-vial that has not contained urine place a single lump of pea size of thymol or camphor, then fill it up with the fresh urine. Urine can be preserved only when the preservative is thus used, for, bacterial fermentation begins early, and, once begun, is not stopped by these substances. Cork, clean the bottle, then paste on the label, stating the full 24-hour amount voided, also the chief clinical data of the case. Without this, the laboratory-man's conclusions necessarily must be brief, guarded, and of less value than where such information is volunteered.

The Supreme Importance of Indican

Indican constitutes the most important pathological substance in urine, nor do I except true albumin, bile, glucose, blood, and other constituents. The reason for this assertion is found in the introductory

remarks. Indican and its related bodies (as detected by the several methods) invariably signify the presence of intestinal toxemia, mostly the result of stasis or at least of sluggish functionation at some point in the intestinal tract. As a rule, this is the colon; still, inasmuch as man has but one gut, we scarcely are justified in any given case, to blame the colon until a thorough study has been made. Man's gut is long, and malpositions or disease of the stomach may sometimes be held to blame for indicanuria. Assuming, however, that in a given instance, by proper physical x-ray or other examinations, we are able to lay the chief or entire blame upon the colon, our therapeutic indications are somewhat more simple and certainly different from those in which we are not certain as to the location of the indican-factory.

Far be it from me to digress into the treatment of intestinal toxemia, a subject threshed out innumerable times in these pages. Rather, it is my desire to insist upon the fact that indicanuria can be cured or at least held in check.

But, why cure indicuria? Why all this fuss about indican, a substance the toxicity of which has been questioned?

This is why: Evidence at hand is convincing that, although indican may virtually be nontoxic, it is accompanied by poisons not so easily detected, and, so, it may be regarded as an index of their harmful presence. Moreover, we have good reason to believe that these poisons of intestinal origin may be the chief or even sole factor in many cases of nephritis, arteriosclerosis, hepatic cirrhosis, and so on, and that a correction of the processes and events leading to nephritis proves a greater satisfaction than telling the patient some years later that he has albuminuria and a hopeless case of Bright's disease. It is the first duty of the physician to treat disease, but, it is his temptation to assume supreme wisdom.

Yes, I can assure you, kind reader, that indican is the most important among all urinary findings.

Acetone, Diacetic Acid, and Other Constituents

We must always be on the lookout for the acetone bodies. There is a widespread notion that these appear only in the urine of diabetics; however, I have encountered them in many cases of renal disease, arteriosclerosis, hepatic cirrhosis, essential blood diseases, other chronic diseases, and some acute disorders.

Many cases formerly thought to be uremia are proving to be cases of acidosis. The onset of symptoms may be gradual, but, generally, it is sudden. Sluggish cerebration, headache, vomiting, and air-hunger are early phenomena. The sweet odor of the breath or the detection of these acetone bodies in the urine proves the true nature of the condition. Alkaline treatment is the only logical treatment and must be pushed, although as a rule it avails but little once the patient is completely comatose. The alkaline solutions may be given by hypodermoclysis, intravenously or rectally (by the drop method). Internal administration will prove disappointing even in the milder cases; still, it may be adopted along with the other measures. Whenever any person exhibits suspicious symptoms and a test for the acetone bodies is desired, the bottle containing the urine must be tightly corked and examined as soon as possible, inasmuch as the acetones are very volatile.

Clinicians have demonstrated that acidosis frequently occurs in young children, but, also, that prompt recovery follows proper treatment. Gastrointestinal troubles may in part be to blame, especially fermentation of the sugars in the digestive tract; in which case they are not absorbed, thus resulting in carbohydrate starvation. The utilization of the proteins for the carbohydrate leaves the acetone remnant. At any rate, it is well to clean out the intestinal tract, administer alkalis and then glucose. Carbohydrate starvation is also caused by the administration of anesthetics and thus accounts in large part for the post-anesthetic nausea. Do not starve the patient before giving the anesthetic; instead, give a little food, even if only a small amount of glucose solution or soup, some time before the operation. This seems to be the latest advice.

The Urinary Reaction

An experienced laboratory-man depends very much upon the reaction of the urine to assist in arriving at a conclusion. The following points are but a very few of the many to be considered:

1. The reaction of the normal urine varies almost from hour to hour and cer-

tainly varies from day to day, the usual average for the twenty-four hours being a slight acidity. This may strike the reader as unimportant, yet, the opposite condition is, certainly, important. That is to say, we cannot regard as normal a high acidity when persisting indefinitely, neither can marked alkalinity continuing hour after hour and day after day be regarded as anything but pathological.

2. A stationary high acidity must be taken seriously, as we have good reason to believe that it is a forerunner of renal tuberculosis, lithiasis or nephritis. Frequently such a condition (so-called acidemia) is found in intestinal toxemia.

3. A persistent alkalinity rarely is explained upon physiological grounds. Where the diet consists almost exclusively of certain fruits, the organic acids (acetic, citric) of which are changed into carbon dioxide, the urine ordinarily proves to be alkaline. A volatile hyperalkalinity usually proves or at least suggests urinary stasis. A fixed hyperalkalinity continuing from day to day may be explained with difficulty. These are often the cases of so-called "clinical phosphaturia" now recognized as clinical alkalinuria or clinical calciuria. We are not prepared to accept the statement that they are not abnormal; for, clinically we observe the patients to be "nervous" or affected with nervous diseases. These cases, and especially their relation to the hyperalkalinity of the urine in them, are yet to be explained satisfactorily; still, we are forced to recognize that they are at least semipathological.

A perpetual fixed alkalinity accompanying albuminuria or also a shower of casts places added emphasis upon the significance of the latter two conditions; for, in many cases of chronic Bright's disease, especially in the arteriosclerotic forms, the urine may become strongly alkaline and continue thus for months before the patient finally dies.

4. Variations in reaction accompany certain infections of the urinary tract. It is my observation that in renal tuberculosis the urine usually is excessively acid for a time and then as a rule becomes distinctly alkaline and remains so. (This explains the well-preserved leukocytes in early renal tuberculosis, and the degenerated leukocytes later.) Colipyelitis ordinarily gives rise to a persistent acid reaction, although occasionally the urine becomes alkaline, and tends to remain so despite all treatment. In the mold-diseases, occasionally encountered, the acidity as a rule is excessive.

5. I have observed several instances of persistent volatile hyperalkalinity, with no evidence of stasis of the urine, and in which I have been puzzled for an explanation. In all these cases, pus was absent, and the patients were boys between two and four years of age. At times, unbelievable numbers of "coffin-lids" were present, but, not a single cell and virtually no bacteria. I have searched the literature in vain for similar cases. The administration of acidifyers (sodium benzoate, salicylic acid, etc), along with an exclusive milk diet, has effected a cure in every case I have been able to follow up. I was very much inclined to believe the cause to lie in the liver, that is to say, in a failure of elaboration of the ammoria into urea; but I have no proof of this and should be pleased to hear of similar cases.

6. The physician must ever keep in mind the influence of urinary concentration upon the reaction. That is to say, a certain sample may be highly acid because very little urine is being passed. The water alone may be deficient, so that, in consequence, the normal amounts of acids and acid salts are in greater concentration.

Many other points in regard to the variation of urinary reaction have been considered by me in other issues of this journal.

Urobilinogen

Although urobilinogen in amounts sufficient to be demonstrated by the Neubauer reaction is not normal to urine, the true significance of urobilinogenuria is not as yet grasped by the average doctor.

This condition, let is be remembered, cannot of itself, as is bilirubinuria, be regarded as final proof of liver disease, but, rather, of disturbed hepatic functionation. To be sure, urobilinogen in many cases proves the existence of cirrhosis of the liver; still, we may find this substance in the urine of the patient having valvular heart disease (by virtue of passive congestion in the liver), infectious fevers (toxemia numbing the liver-cells), and so on. However, if kidney-, heart-, and bacterial diseases can be ruled out and the diagnosis is likely to be hepatic cirrhosis, the finding of urobilinogen in the urine

is very important in establishing the proof, as I have found several times. This substance is rarely found in the urine in localized liver disease (cancer of liver, abscess, etc.) inasmuch as the unaffected cells take up the function of handling it, which is not the case in cirrhosis, where practically every histological unit is more or less embarrassed.

Painful Oxaluria

The years pass by, and I continue to run across a certain number of cases of oxaluria dolorosa. The surgeon tries the old nephralgia game, and fails to get by; he also fails on the renal-calculus guess. The patient drifts back to the general practitioner, and the latter recognizes the condition and cures it. The great surgeon proceeds in his blind ignorance and prejudice. It is very difficult for some men to believe that the passage of calcium-oxalate crystals through the ureters may explain the anguish experienced by these patients, some even insisting that there must, certainly, be macroscopic calculi to cause the severe symptoms, while others fall back upon the "kink in the ureter" explanation. As a matter of fact, a calculus of calcium oxalate always throws a radiographic shadow and a thick ureter is not easily kinked.

These patients continue to suffer as long as the crystals pass and recover entirely when they disappear from the sediment. This is proof enough for me—was, in fact, sufficient proof several years ago, when I reported my first cases.

Not all cases of gravel are those of painful oxaluria; sometimes uric acid and phosphates are to blame. Intelligent treatment results in cure—and a "mighty" grateful patient. Try it and see.

Renal Cells

While other laboratory-men are emphasizing the significance of casts (and I do not belittle their presence), I still am pointing out the fact that the patient is the better off for getting rid of them, although the loss of a renal cell means approximately the loss of another hour of his life. If the sample of urine contains several hundred renal cells, and they continue to be voided, urge the patient to prepare his will. Into the literature there is creeping the suggestion that renal cells are regenerated; pathology, however, does not teach this. We have no renal cells to spare. Those left may take up an added duty and keep up normal functionation, eventually, though, the limit will be reached and compensation broken. Do not overlook the renal cells in the urinary sediment.

Cylindroids

Perhaps when, at the beginning of this article, you read that I would say nothing about casts, glucose, and albumin, you wondered what else could be said concerning the urine analysis. And, yet, I am trying to be brief. Do not forget the uranalysis when diagnosing; do not forget it when treating your patient. For, the analysis of the urine does much more than diagnose hopeless Bright's or diabetes.

The lowly cylindroid is usually excused as harmless, but, I do not believe that it is entirely innocent. Of course, we must not fall into the error of terming every amorphous mucous formation a cylindroid; for, the true cylindroid is mothered in the same mold that gives rise to the hyaline or granular cast; that is to say, by the uriniferous tubule.

What do the cylindroids signify? For a cylindroid to be formed, the mucus must remain in the tubule for a considerable length of time. It follows, therefore, that there is a sluggish flow of urine through that tubule. It means that there is a water paucity and solids are overplus at that point. We cannot always say why the normal flow has been retarded; but, inasmuch as such is the condition, we should keep in mind that cylindroids in the urine suggest a definite therapeutic indication—the giving of water (by prescription, if need be) and the administration of mild diuretic remedies.

An Old Doctor's Life Story

An Autobiography

By ROBERT GRAY, M. D., Pichucalco, Mexico

EDITORIAL COMMENT.—It is to be taken into consideration that the following interesting appreciation of Carranza was written by Doctor Gray several years ago; to be exact, in 1914. This will explain several seeming inconsistencies that would arise if the story were read in reference to present or quite recent conditions in Mexico.

[*Continued from September issue, p.* 657]

An Appreciation of Carranza

CARRANZA merits a high degree of confidence, because of what he accomplished in view of such an unpromising inception of his enterprise. And now that the crumbs of generous clemency and patriotic justice are dropping from the sanguinary claws of lion-conquest, there seems to be cheering promise that he will be equal to the arduous task he has assumed. He has the unselfish advice of the representatives of all nations of the earth, eager to see peace and prosperity once more established in this great republic and clearly has yielded to sober common sense some points that would have intensified more disastrously the ruin he designs to modify. The rifle is a remorseless argument against public disorder and conspiracy; and Carranza holds that power with inflexible tenacity. It now seems that his will be the iron hand of destiny Mexico may not dispute, but which, nevertheless, will not be relentlessly brought down beyond inevitable necessity. He is in a position to become the Savior of Mexico, for, he may solve the intricately tangled peon problem correctly, while he may easily dominate any revolutionary tendencies among his intellectual opponents without afflicting any serious personal violence. They are down, and it were easy to prevent them from rising again, as compared with the previous task of disarming them.

I am satisfied that more intellect favors Carranza or is a neutral factor in popular politics than I ever imagined it possible for him to win. The sense, evenhanded justice and impartial equity have recoiled from approving and supporting any government that ever has ruled Mexico, save that of Jaurez; and even that was impaired and deformed by circumstances over which he had no control. The government of Diaz was an unfortunate necessity; and its fruits are its only defense and justification.

Diaz has been praised and admired because of what he developed from the chaos of ruin and wreckage of desolation that anarchy had flung over the naturally fair and smiling face of, yet so pathetic, Mexico, a land ever ready to respond to even the most careless methods of indifferent culture. The brilliant results masked the means employed to attain them, while sober scrutinizing judgment realized that greater humanity in governing would have surely proved a dismal failure.

The creative genius of Diaz held Mexico in leash and raised its political vitality, causing the land to throb and pulsate with growing prosperity and checkering it with railways and telegraphs and telephones that connected it directly with the United States, and which eventually rendered Madero's undertaking for liberty attractively feasible. Then, however, an aroused sentiment drove Diaz into exile, even though he had not in the slightest been vanquished by his adversaries' arms, but, the popular clamor for his abdication being so overwhelming that he could not withstand.

Madero came softly and subtly vain into the arena, arrogantly flattered by his festive walkover, losing the halo of his magnetic sway over the minds of followers who worshipped him almost to idolatry, and this reacted with such paralyzing intensity that his devoted troops arrayed themselves against him ere he was fairly seated in the presidential chair, congealing those who gave but lukewarm support, and putting his natural enemies so far out of their former restraint that they almost openly conspired against him so forcefully as to inspire a revolt of the federal army against him and hurl him to his violent end.

Carranza was the only man of high official prominence who unhesitatingly defied General Huerta, the usurpers, followed by the state of Sonora somewhat later. Huerta had the federal army, Orosco and the most of the forces under the command of Madero, in his campaign against Diaz, and all the machinery of the government, in the face of which Carranza had to recruit and equip an army without being possessed of

financial resources, save some voluntary and more forced contributions—a herculean task, hedged about and enveloped with difficulties that few men might have dared to encounter.

It was not so much the overthrow of the government as the murder of Madero that provoked the reaction in popular sentiment that rendered the achievements of Carranza possible. When the tidings of the murder came, I heard apparently uncompromising enemies of Madero during his military and political campaigns swear that Huerta and his clique should be burned—men who seemed rejoiced at the success of the revolt a moment before. They at once were in sentiment, if not in action, rebels against Huerta, and the important parties in open revolt against Madero immediately declared against Huerta; and they never abandoned the conflict till there were no more armed foes—that is, after Carranza arrived in Mexico. Of course, they seemingly had to be annihilated more than once. Yet when at last they came out into the open, after the strife had ceased, they lined up some 4,000, with less than 1,000 federals to give up their arms. It seems that such were about the proportions everywhere, as Mexico City had but 30,000 defenders, while Carranza and Zapata had three times as many up at the front and Villa had half as many more in the north.

Thus, the federal cause had not an orphan child's show to succeed. Huerta lost ground almost from the start, and his almost unmasked efforts to provoke American intervention, to attract the rebels to join him, alienated from him some elements of the people supporting him and who had been loyal or at least neutral, while he did not win one rebel over to his side.

Due to the developing influences of all the process, from the first appearance of Diaz to the triumph of Carranza, the latter has fivefold more influential support than Madero ever had prompted, probably, more by the force of intimidation than by love of any principle involved—while the second and the lower strata of society are now a homogeneous unit; and these people are daily growing more and more contented.

We have a simon-pure military despotism; which, though, is more stably protective than the ever changing rule of hostile bands that imperil life and property.

The amiable tone of the Mexican press is rapidly modifying deeply cherished bitter animosity against the American people. Intelligent people, certainly among those who will support Carranza from necessity rather than choice, assure me that the course of President Wilson has been the most admirable political diplomacy on record, as much as they abused it formerly; and they believe that American policy will give stimulating impetus to the reestablishment of Mexican prosperity.

Many Americans, down here, favored and some urged the recognition of Huerta, as they believed that a successful revolution would be impossible, while, if aborted its baneful consequences might thus be avoided and peace promptly restored. Naturally, we were ignorant of the widespread deep-rooted determination to depose usurped despotism, which we viewed in a more extenuating light than the middle and lower classes regarded their enslavement. Public sentiment was muzzled and stifled to such a degree that many could not, for a long period, fathom the sentiments of near neighbors and even kinsmen, till many supposed to be loyal to Huerta suddenly disappeared in rebel ranks, and then came back clandestinely recruiting when the federals were at a little distance. Rebels ever knew of the movements of the federals, while federals were mostly in the dark as to rebel positions, so that small scouting parties did not venture far from their supports. Several times the revolution seemed completely crushed, armed forces being killed and captured almost to the last man; but, in a little time, when the federals were called away, they appeared again, amply recruited and armed and more vengeful than ever.

The rebels had the ramifications of their communications securely established through Indian and peon mediums, reaching every nook and corner of the country; more rarely, if ever, discovered and never importantly intercepted. Hence, little skulking bands and big armies were working in accordant harmony. Small, insignificant parties were employed to hold in fruitless operations, federal troops that were to prevent the spread of revolution where the unimportant rebel parties were hiding and raiding. Nearly half the federal army was thus employed in such ineffective service; while the well-organized divisions were steadily being beaten and forced back in northern and central Mexico, the preponderance of patriotic sympathy was with the rebels.

[*To be continued.*]

What Others are Doing

THE TREATMENT OF MALARIA WITH LUARGOL

The very satisfactory observations on the treatment of protozoal diseases from the administration of arsenical remedies, since the introduction of atoxyl and, later, of arsenobenzol (salvarsan), very naturally led to further investigations with a view to finding compounds of arsenic that might make possible even better results. The introduction of neosalvarsan meant a distinct step forward, while the exigencies of the war have given rise to a number of similar preparations (made in England, France, Canada, Japan, as well as in the United States) that are designed to replace the patented and expensive original arsenobenzol.

Among the many preparations thus produced, the one of Danysz, namely, luargol, or the sulphate of argento-antimoniated-dioxidiamine-arsenobenzol is credited with splendid clinical effects, having been employed with good results, not only in syphilis, but also in other protozoal affections. Thus, in the *Paris Médical* for June 9, Dr. J. Montpellier reports on his experience with luargol in 10 cases of malaria, in which small intravenous doses repeated daily for from five to seven days were borne without any local or general reaction and without untoward accidents.

Seven of the 10 cases were of the tertian type, and the plasmodium vivax disappeared promptly from the blood. The 3 other cases were those of the plasmodium malariæ (laverania malariæ), and here the arsenical treatment failed to destroy the blood-parasites, although it did have the effect of controlling the temperature rises, which before had not been possible by means of quinine alternated with hectine. [*Hectine* is the sodium salt of benzol-sulphone-para-aminophenyl-arsenic acid, a chemical substance closely allied to atoxyl.] In one case of mixed infection, the plasmodium vivax disappeared from the blood, while the plasmodium falciparum persisted.

Montpellier concludes that the action of luargol is directed especially against the parasite of benign tertian malaria, although he points out that these patients were not under observation sufficiently long to determine the ultimate extermination of the plasmodium vivax.

However, in all cases treated, a decided general improvement was manifested after the course with luargol and were attended by an abundant and rapid reproduction of blood-cells. The red blood-cells increased in number by one-half to one million in the course of from two to four weeks, while the hemoglobin rose between 5 and 18 percent.

THE TREATMENT OF CHOREA WITH MAGNESIUM SULPHATE

There is, in *The Journal of the American Medical Association* for October 28, 1916 (p. 1338), an account of Schroeder's method of employing magnesium sulphate in the treatment of chorea. The author describes the histories (*Ugeskr. f. Laeg.*) of 9 cases of chorea minor in children and 2 cases in adults, all rebellious to the various other measures tried, but, yielding to subcutaneous injections of a 20 percent solution by volume of magnesium sulphate in small, slowly increased doses, from 0.2 Gram to 3 Grams a day or, in the very severe cases, up to 8 Grams a day. The results were so good that he thinks hospitals might be justified in giving this method of treatment a trial, keeping the patient under surveillance. The improvement under the dosage named and the return of symptoms when the drug was tentatively suspended confirmed its therapeutic possibilities.

When Schroeder began this treatment, he had no knowledge of others having applied it, however, he later found records of its having thus been used by Calcaterra, Marinesco, Caronia and Grober, all of whom, though, injected the drug intravenously or intraspinally. The subcutaneous

route does not seem to have been employed.

In the majority of Schroeder's cases, the chorea was of two or three months' standing, the shortest duration being of about two weeks, the longest of three years.

THE CAUSE AND PREVENTION OF PELLAGRA

The various hypotheses that have been advanced in explanation of the etiology of pellagra are far from presaging a speedy agreement among investigators. Nevertheless, the view confidently expressed by the Robert M. Thompson Pellagra Commission, that this disease is of infectious origin, appears to be gaining ground, while the importance of insufficient or of a badly balanced diet, which in some quarters is incriminated as the principal cause of the disease, particularly by officers in the United States Public Health Service, is losing ground, at least in so far as pellagra can be considered as a deficiency-disease; nevertheless, malnutrition of a certain kind is considered as a predisposing or contributory factor among the causes of pellagra.

In an article on the etiology and treatment of pellagra (*The Southern Med. Journ.*, July, 1917, p. 547), Dr. J. H. Graves, of the Medical Officers Reserve Corps, U. S. Army, denies that diet is of greater importance in this than in any other wasting disease. According to him, pellagra presents all the earmarks of an infectious or, at least, a severe toxemia. This view is not weakened by the fact that characteristic bacteria have not been found in the blood of pellagrins, nor does he think this necessary. As in tetanus, where the infectious organisms never reach the blood, while the toxins do so, he believes that in pellagra some microorganisms infecting the lymphatic system and reaching the chyle or lymph may produce toxins that after absorption may give rise to the characteristic symptom-complex of the disease.

The infection of pellagra, Doctor Graves believes, is transmitted, probably, by the bite of mosquitoes. In his observation, two varieties of this insect deserve especial notice, namely, culex and ædes calopus. The culex, particularly, is a house-mosquito, breeding in sewer-pipes and in the contents of closets, latrines and open cesspools, and it is significant that improved sewage disposal reduces the incidence of pellagra, since thus the breeding places are obliterated. At any rate, Doctor Graves has found that every single one of the many pellagrins treated by him told of having repeatedly been bitten by mosquitoes.

As for the prevention of pellagra, Doctor Graves suggests that a smudge produced by burning a mixture of tobacco and sulphur (upon which a little alcohol may be poured, to start it) answer excellently for killing adult mosquitoes in the house. This fumigating should be done systematically. Furthermore, the contents of the latrines, as well as any other breeding-places, always should be covered with a generous layer of crude petroleum or kerosene. To kill adult mosquitoes seen resting on the damp walls of the pit, the latter may be covered over and then fumigated with the smudge above described, repeating this as often as indicated, in order to kill off any further females entering for the purpose of passing the winter there. It is the opinion of the author that, when infected fertilized female mosquitoes thus succeed in hibernating in such cesspools, they become the means, the world over, of propagating pellagra the following spring.

THE TREATMENT OF PELLAGRA

Regarding the treatment of pellagra, Dr. J. A. Graves, whose article was referred to in the preceding abstract, believes that arsenic is antagonistic to the disease and that, if administered early enough, in proper form and dosage, in a suitable manner, and over the required length of time, it is very useful. He prefers the arsenic in the form of sodium cacodylate, administered by intravenous or intramuscular injection. He gives 3-grain doses every other day, every three or five days. For intramuscular injection, the site usually selected is the deltoid, although in very thin patients the author selects one of the glutei; the sterile needle being plunged deeply into the muscle. Induration is observed only exceptionally. For adults, Graves believes the intravenous mode of injection to be superior.

In anemic patients, a ferruginous tonic, such as Blaud's pill, may be given, either with or without strychnine.

As a general measure, it is important to prevent accumulation of toxic material in the bowels, and for this reason the admin-

istration of small doses of castor-oil every night is recommended as good treatment. This may have to be reduced to once every other night or once or twice a week. In the presence of severe diarrhea, physiologic salt solution may be injected into the colon by Murphy's drop-method, thus replacing the fluid lost from excessive diarrhea and aiding the kidneys and skin to eliminate toxic bacterial, while assisting the hepatic function.

The diet should be bland and not irritating. The author advises a generous protein diet, together with plenty of vegetables. During active exacerbations, rest in bed is important, and it is essential to protect the patient absolutely from exposure to the sun. Finally, attention must be paid to screens and to other hygienic measures.

If it is possible for the patient to spend the months of June, July and August in a cooler climate, this will promote recovery, the idea being to send the patient where mosquitoes do not thrive. In any case, a change of environment is beneficial, this inducing appetite and cheer and relieving the mental depression so often seen in this disease.

INCREASING THE EFFICIENCY OF THYMOL IN ANKYLOSTOMIASIS

As every physician knows, thymol, the remedy most used in the treatment of hookworm-disease, is very prone to cause unpleasant gastric symptoms and not infrequently nausea and vomiting. Dr. B. E. Washburn, of Wilson, North Carolina, who formerly conducted experiments on the treatment of this disease during a campaign carried on by the Rockefeller Institute and the government of Trinidad, has found that by mixing the thymol with sodium bicarbonate the liability to gastric symptoms is greatly reduced.

Far more important, however, is the fact, also determined by Washburn, that this mixture is much more highly curative than thymol when the latter is used alone. Thus, out of 325 patients treated with pure thymol, finely powdered, only 41, or 12.6 percent, were cured by two treatments. In another district, of 1112 patients treated with thymol and an equal part of lactose, 546, or 49.1 percent, were cured by two doses. When smaller proportions of lactose were added to the thymol, the percentage was not as large.

Still greater success, however, was obtained when sodium bicarbonate was given in association with the thymol. This combination was particularly effective in relieving gastric disturbances, as already stated. When 30 or 40 grains of sodium bicarbonate was taken with the thymol (in a capsule), there was gastric disturbance in only 12 percent of the cases, and a complete cure resulted in 53.1 percent of the cases after two such doses.

While experiments have not been extensive enough to justify conclusions as to the sodium bicarbonate and the lactose mixtures, they certainly are most encouraging.

TECHNIC OF INTRAMUSCULAR INJECTIONS

According to *The Journal of the American Medical Association* (Oct. 28, 1916, p. 1338), Kissmeyer (*Ugeskr. f. Laeg.*) has encountered some cases of neuritis of the sciatic nerve developing subsequent to intramuscular injections of salvarsan, and discusses ways and means to avoid such a complication, because textbooks as a rule, do not explain the procedure in all its details.

Kissmeyer advises to have the patient stand, bending forward a little, supporting himself against a table or the back of a chair, bending slightly toward the side where the injection is to be made, to relax the muscles. When the patient is reclining it is difficult to find the right place, as then the anatomic conditions are somewhat altered. The physician sits on a high stool, back of the patient, and marks the crest of the ilium and on a line two fingerbreaths below the highest point of the crest. Another line is marked two fingerbreaths behind the trochanter. The best point to insert the needle is, where these lines intersect, so as to avoid nerves and vessels. The cannula is pushed in very slowly, supporting the hands by the ulnar margin against the patient and pointing the tip of the cannula toward the middle and downward.

When the cannula is in place, the patient is asked whether he feels any pain, especially pain radiating into the legs. If he does, the tip of the cannula is drawn partly out and turned so as to point it a

little more toward the side. If the tip hits against bone, it should be withdrawn a trifle. After waiting a little, to be sure that no blood drips from the cannula, the injection of the drug is proceeded with. The injection itself does not cause much pain if the quantity is not too large. The customary dose is 0.4 or 0.5 Gram of salvarsan in 3.5 mils of oil. The pain that follows, which seldom is felt longer than for one day, may be soothed with a sedative remedy.

THE CLINICAL PICTURE OF SHOCK

In a lecture on the physiological factors concerned in surgical shock, Dr. Walter B. Cannon (*Boston Med. & Surg. Jour.*, June 21) cites two descriptions of shock that are so graphic in their word-painting that we have believed it well to quote them. The following is an abbreviated account given by Fischer, as quoted by Cannon:

"The patient, a strong and perfectly healthy young man, was struck in the abdomen by the pole of a carriage drawn by runaway horses. We have not been able, after careful examination, to find any trace of injury to any of the internal organs Nevertheless, the grave symptoms and the alarming look which he still presents made their appearance immediately after the accident. He lies perfectly quiet and pays no attention whatever to events about him. The pupils are dilated and react slowly to light. He stares purposelessly and apathetically straight before him. His skin and such parts of the mucous membranes as are visible are as pale as marble and his hands and lips have a bluish tinge. Large drops of sweat hang on his forehead and eyebrows, his whole body feels cold to the hand, and a thermometer indicates a degree and a half Centigrade in the axilla and a degree in the rectum, below the normal. Sensibility is much blunted over the whole body and only when a very painful impression is made on the patient does he fretfully pull a wry face and make a languid defensive movement. If the limbs are lifted and then let go, they immediately fall as if dead. The urine is scanty and dense, but, free from any traces of sugar and albumin. The pulse is almost imperceptible and very rapid. The arteries are small and the tension is very low. The patient is conscious, but, replies slowly and only when repeatedly and importunely questioned. On being thus questioned, he complains of cold, faintness, and deadness of the extremities. His respiration is characterized by long, deep, sighing inspiration, alternating with very superficial ones, which are scarcely visib' or audible. While being brought to the hospital, he vomited several times, and nausea and hiccoughs still remain. His pallor, cold skin, and hoarse voice immediately recall the appearance of a cholera-patient; characteristic dejections are alone wanting to make the resemblance complete."

This description by Professor Fischer accords closely with the summary of the state of shock given by Sir W. Watson Cheyne, who writes:

"The patient is usually found lying in a state of complete muscular relaxation or, if he makes any movements, they are very irregular and feeble. The face is pale and drawn, the pupils dilated. There is sweating about the head, the reflexes are very slight and there is diminished sensibility, but, not absolute unconsciousness. The patient can answer questions when spoken to, but, if not disturbed, will generally lie in a semi-conscious condition. The respirations are feeble, irregular, and sighing. The pulse is small, frequent, and dicrotic. At first, the pulse rate is generally slowed; and increased frequency of the heart beat is regarded by some as a sign of the commencement of reaction. The skin is cold; the temperature subnormal."

THERAPEUTIC INDICATIONS DEDUCED FROM THE STUDY OF SHOCK

A report of one of the meetings of the French army surgeons is cited in *Paris Médical* for March 31, bearing upon a study of shock, from which valuable therapeutic deductions could be drawn.

In accordance with Crile's findings, the most characteristic symptom of shock is, the lowering of the arterial tension; and this is so important that it can be employed for prognostic indications.

Blechmann confirmed Crile's conclusions, that wounds of the parts protected by the cranium and of the thoracic cage influence the blood pressure only very little, but, that the important producers of shock are wounds of the abdomen, the sacral region, and the limbs. The author cites his experience in certain cases, where wounded who had lost but little blood had been received

at the ambulance from two to six hours after having sustained their injuries and exhibited no arterial tension whatever at the radial artery, the pulse being discernibly only at the humoral artery. In these cases, it was not possible to raise the blood pressure, and the patient succumbed to the shock.

In accordance with Roger's view, primary shock may possibly be attributed to a diffuse inhibition of the functions, while the secondary symptoms may be explained by assuming an exhaustion of the neurons associated with, and changes in, the hepatic and adrenal glands.

As for various therapeutic procedures, Blechmann prefers, when blood transfusion is impossible, the intravenous injection of artificial serum (Ringer-Locke's or Tyrode's), hypotonic and oxygenized glucose solution, while he has found that adrenalin solution is effective only in large doses, and if its administration is continuous, as in Murphy's method. Etherocamphorated and guaiacolated oil also has given splendid results.

It is of primary importance to apply heat, to lower the head of the patient, and to inject morphine before any other therapeutic measures are undertaken.

In Blechmann's opinion, the careful determination of the blood pressure of wounded in a state of shock is of importance equal to that of Babinski's sign in nervous affections or of lumbar puncture in meningitis.

Attention is called to the differentiation between shock proper and posthemorrhagic acute anemia. Although the blood pressure is low in both, they rest upon a different basis; which is of therapeutic importance. While intravenous injections of saline solution, even in large doses, are indicated after severe hemorrhage, they may cause heart-block if this organ is depressed by shock. Neverthe'ess, Blechmann believes it proper to employ intravenous injections in cases of traumatic shock, provided that they are undertaken with care.

RESPIRATORY SUCTION AN AID IN SURGICAL SHOCK

In connection with the preceding item, it is interesting to refer to some remarks published by Dr. W. T. Porter in *The Boston Medical and Surgical Journal* for May 17, where the author insists upon the importance of the inclined position. In shock, the sufferer bleeds into his own abdominal veins, thus taking the blood from the heart and brain. This inclined position, however, feeds the heart and brain by gravity. Although adrenalin and intravenous injections of saline solution tend to fill the heart, they are not logical remedies, in Porter's opinion, for the reason that they do not bring back the blood from the congested veins into the arteries and thus into the feeding capillaries. The indication is, to pump the blood from the veins back into the heart.

In order to secure this desideratum, Doctor Porter proposes the employment of the thoracic pump.

When the diaphragm descends in inspiration, the cavity of the thorax is enlarged. It is as if a squeezed rubber bulb were expanded under water; the surrounding fluid enters the sucking ball. So do surrounding fluids enter the chest. The air is sucked in through the trachea and blood is sucked in through the veins. In man, this suction may balance a column of mercury 30 millimeters high—equal to a column of blood 15 inches high—a value one-third the total normal diastolic arterial pressure. Without this respiratory suction, a weak arterially tuned man would faint every time he stood up. It is this potent force the author proposes as a life-saver in traumatic shock.

If the normal contractions of the diaphragm so aid the circulation then its powerful contractions will aid still more. Powerful and frequent contractions are within our command. We have but to increase the carbon dioxide to the inspired air to call forth deep and rapid respiration. The necessary amount of carbon dioxide is not injurious. To an animal, it can be given from a gas-tank discharging through a Wolff's bottle into a T-tube the short limb of which is attached to the tracheal cannula. In man, rebreathing may be employed. The patient may breathe in and out of a rubber bathing-cap, previously inflated with a Davidson syringe. When oxygen-hunger approaches, the cap is removed. After a moment or two, the procedure may be repeated.

MALARIA PROBLEMS INCREASED BY RICE PRODUCTION

According to *The Southern Hospital Record*, the acreage planted to rice in California and Louisiana this year is said to be twice that of 1916. This will double the

problem of mosquito and malaria control in the rice-fields and will provide a rich realm for investigation into methods of control.

Since the most favorable conditions for the production of rice and for the breeding of malaria-bearing mosquitoes are identical, the problem in the rice-fields is difficult. In other communities, the control of mosquitoes is easily accomplished. The eradication of malaria in the average community depends largely upon public opinion and the progressiveness of its citizens, and hospital superintendents and physicians of the rice-planting sections will perform a public service if they will use their knowledge and influence to prepare the people for a study of their local conditions and warn civic bodies in time to prevent disease.

ANALGESIC ACTION OF MENTHOL EXPLAINED—ALSO, DIAGNOSTIC USE

In an article published in the *Wiener Medizinische Wochenschrift* for September 30, 1916, Prof. M. Grossmann, of the University of Wien, calls attention to the fact that the analgesic, pain-allaying, virtue of menthol is referable to two of its physiologic influences, namely, it causes constringing of the arterioles and a topical reduction of temperature; in this latter respect acting precisely as do the time-honored cold compresses and the like. The effect of vasoconstriction, particularly in hyperemic mucous membranes, need not be dilated upon. However, the main object of the author is, to point out how this analgesic quality of menthol tends to effect the cure of various painful affections and in others to constitute it a valuable adjuvant to other treatment.

ALLAYING OF PAIN IN ITSELF PROMOTES CURE

To allay pain, says Professor Grossmann (*loc. cit.*), in itself in a high degree actually contributes to the cure of painful affections—an idea vaguely present in the mind of many of us, but first given definite expression by Gustav Spiess, of Frankfurt a. M., in 1916, in a contribution to the *Muenchener Medizinische Wochenschrift*, in these words: "Not only fresh wounds, but inflammatory processes just starting or already pronouncedly developed, will be favorably influenced and even the cure decidedly hastened if the concomitant pain is removed by artificially induced anesthesia." A clear and wider recognition of this fact, Grossmann thinks, cannot fail to prove of value in practice.

Whether this analgesia be of central origin or merely peripheral, the effect is the same. In this connection, he cites other writers who, besides himself, have found in menthol a valuable analgesic as well as antiphlogistic in certain conditions, as in rhinitis, say, in which a cure is hastened by allaying the symptom of pain and by ameliorating the marked hyperemia of the nasal lining.

It may be added, by the way, that Crile's investigations in anoci association are to the same effect, as to the favorable results of relief from pain.

THERAPEUTIC USES OF CORYFIN. OR MENTHYL ETHYLGLYCOLLATE

Maugre its useful medicinal qualities, as outlined in the preceding paragraphs, menthol, Grossmann declares (*loc. cit.*), has two objectionable drawbacks; namely, its effects are too evanescent, and repeated applications to the mucosa give rise to disagreeable irritation. It was not until its synthetized modification — menthyl ethylglycollate—was available that this form of medication could grow in popularity; for, the action of the latter is much more enduring, while no irritation results when repeatedly applied, even at short intervals.

At present, we are told, coryfin (the commercial term) is being extensively employed (in Central Europe, at least) in the treatment of acute rhinitis, of catarrhal and even tuberculous conditions of the nose, pharynx, and larynx, of toothache, and of certain forms of headache, as also of neural pains elsewhere. Moreover, some have found coryfin useful in singultus, nausea, and the gastric crises of tabetics. To the foregoing list, Grossmann adds several pathologic conditions in which during a number of years he has had some brilliant results, and in which coryfin has not been tried by others.

In the first place, Grossmann relates that this preparation repeatedly has afforded grateful relief in pemphigus of the buccal and nasal cavities, the erosions being

daubed with the liquid. This extinguishes the fetor and measurably contributes to the healing up, and thus, though but a palliative measure, it still is a blessing to the sufferer.

Next, the author mentions tic douloureux and neuralgia of the first and second branch of the trigeminus nerve. Before resorting to heroic measures (cautery of the turbinate bones, neurotomy), he first tries coryfin. He slightly moistens small cotton pledgets with it and deposits one against either side of the middle turbinate bone. (Other sites might serve, this one being chosen because of the predominance here of the terminals of the fifth nerve.) These pledgets are renewed every two hours or as often as the sensation of cold no longer is experienced, and this is kept up for not less than one or two days after all signs of pain have disappeared—the more thorough this phase, the author avers, the more lasting the relief; repetition at times not being necessitated for weeks or even months.

The Abstractor will add that only a trifle of the remedy should be in the nasal pledgets, for, when any of the fluid flows out upon the lip, it is rather disagreeable; also, too much in the sensitive nostril may prove irritating and somewhat painful temporarily.

NASAL ASTHMA RELIEVED BY MENTHYL ETHYLGLYCOLLATE

Doctor Grossmann (*loc. cit.*) has attained excellent results from the use of methyl ethylglycollate in asthma of nasal origin. Concerning his views anent the etiology and clinical phenomena of this affection, he refers to his article on this subject published in 1910 in the *Wiener Medizinische Wochenschrift*. He reminds the reader, however, of the following facts, experimentally established by himself.

Any kind of irritation of the nasal mucosa (i. e., of the second branch of the trigeminus) may call forth a functional disturbance of the heart and, secondarily, an accumulation of blood in the lung-vessels. Then this congestion in the pulmonary circulation gives rise to an impediment of the respiration, which may be sudden and intense if the disturbance is of like nature—hence, the suffocative attack. Why it is that asthma does not invariably follow such irritation of the nasal lining (hypertrophy, inflammation, polyp, dust), still remains an unsolved problem. Nevertheless, many times these attacks will disappear as if by magic upon the removal of certain lesions in the nostrils; nor can it be predicted whether or not treatment of the nose will cure asthma.

It is here that Grossman finds coryfin of "inestimable" value for a differential diagnosis. Any condition of irritation in the nose is suppressed within a few seconds by an application of this remedy; consequently, a given asthmatic attack must cease simultaneously if it is of endonasal origin. But, if this does not happen, then the provisional diagnosis can be discarded as positively erroneous. If, on the other hand, a positive result is attained, then not only is the diagnosis proven, but the subject is instantly relieved of his respiratory agony. The inference is clear; the patient has at hand a reliable palliative until such a time that the nature of the nasal trouble can be ascertained and the cause removed. It is evident, one may add, that a similar procedure will apply to unidentified headaches, where often a little coryfin in the nose may obviate the useless doping with coaltar analgesics.

ON THE CONNECTION BETWEEN CARCINOMA AND THE THYMUS GLAND

Investigations conducted by Freund and Kaminer have established the fact that when the blood-serum has lost its power to destroy the cancer-cells the individual is predisposed to carcinoma. Other investigations have shown that the serum of the newborn possesses much stronger lytic properties than does that of adults, also, that this lytic power diminishes very rapidly with the growth of the child. These observations naturally suggested a possible connection to subsist between the development of cancer and the involution of the thymus gland, and Kaminer and Morgenstern undertook to find the answer.

In a paper read before the Society of Physicians of Vienna (*Wien. Med. Woch.*, 1916), the two collaborators reported what thus far they had found. Thymus extract possesses a very much greater lytic power than does blood-serum, both in man and in animals. However, in the case of cancer-patients whose serum does not destroy cancer-cells, injections of thymus extract failed to show any resolvent action upon the cells of the tumor.

Miscellaneous Articles

Food Economics and the Chemistry of Cooking—V

MILK is the first food of young animals. Milk is a white, opaque liquid, having a slight, but peculiar, odor, which becomes more distinct when the milk is heated.

It has a slightly sweetish taste, owing to the milk-sugar that it contains.

It is heavier than water, usually in the proportion of about 103 to 100.

When freshly taken from the animal it is slightly alkaline; but, it speedily loses this alkaline character, owing to the formation of lactic acid.

The principal constituents of milk are water, fat, sugar, albumin, casein, and mineral elements.

Constituents of Milks in Use

	Woman	Cow	Ass	Mare
Water	89.08	87.02	91.65	90.71
Casein	1.52	4.43	1.32	1.20
Butter	3.55	3.15	0.11	1.17
Milk sugar	6.70	4.77	6.03	5.70
Salines	0.45	0.65	0.34	0.37

Albumin in varying quantity.

The boiling and sterilizing of milk by heat destroys the albumin, which rises to the surface as a scum, bringing with it some of the mineral elements and some of the sugar. Sterilized milk is less digestible than raw milk.

Of the many subjects considered by the writer, that of milk and the artificial feeding of infants has called for most thought.

Artificial Feeding of Infants.—If we were in a state of nature, our task would be a light one. But, we are not!

The highly civilized condition of society at the present day has a tendency to produce in our females a certain delicacy of constitution, with a resulting lack of stamina in their limited number of offspring. The effect of these conditions is, the great mortality of infants between the ages of one and two years. Of all the fatal affections that occur during the first year of life, 40 percent are diseases of the digestive organs. Moreover, almost one-half of the infants who die before the end of the first year do so before they are a month old. Hence, the hygienic rules for infants concern the digestive organs mainly—so much so, indeed, that infant hygiene and the hygiene of the digestive organs of infants appear to be nearly identical. At birth, there is a sudden and violent change in the condition of the infant and of its environment. Before birth, the digestive organs are quiescent. Before birth, its respiratory organs are quiescent also. The oxygen required by its blood it obtains from its mother's blood—its own blood being different from that of its mother. Such excretion and elimination as take place previous to birth are effected through its mother's organs. This is not widely recognized by the medical fraternity and not at all by the laity. Hence, child-birth troubles!

Despite the great amount of scientific thought and research put forth to render cow's milk a satisfactory substitute for that of the human female, the result has not been a complete success.

Thus, the casein of cow's milk is not nearly so digestible for the infant as that of its mother's milk, coagulating, as it does, in large tough lumps, while, in addition, it is in far greater proportion to the other ingredients. In woman's milk, it amounts to a little over 1 percent, while in cow's milk it is over 4 percent. Should this casein, or curd, fail, from any cause, to digest in a short time, it readily undergoes putrefactive fermentation with resulting generation of gases and toxins; a fact very unfavorable to the health of the in-

fant. To this coagulation of the casein in lumps and its consequent failure of digestion, are due, without doubt, many cases of colic, vomiting, and diarrhea. These casein curds often are expelled from the bowels, undigested in the form of whitish masses.

To prevent the formation of these large indigestible curds, we may add potassium bicarbonate.

From many years' experience, it appears to the writer that we can largely prevent the formation of these lumps of curd by diluting the milk with hot starch-water, obtained by boiling Bermuda arrow-root or oatmeal in water and straining, and adding some sugar of milk; this causing the casein to be precipitated in fine flockules, and thus preventing lumping. After the infant has reached the age of six months, well-cooked and strained oatmeal, when used as a supplemental food, for some time, will meet all the wants of the growing child. A. T. CUZNER.

Gilmore, Fla.

SYPHILIS COMPLICATING PULMONARY TUBERCULOSIS

Doctor Goodwin's view of the importance of the gastroenteric ulcers in tuberculosis (May, p. 361) has given me a new idea. I knew that this ulceration did take place in this malady. I did not realize though, that, *as a rule,* the fever was consequent upon the ulcers. That puts an entirely different aspect upon the matter.

I have been prescribing calcium sulphide to a considerable extent and have obtained very good results from it, especially in the incipient stage of pulmonary phthisis; in the latter case, however, I prefer nuclein in combination with it, unless the cough is tight and then I give calcium iodide in conjunction. To my mind, calcium sulphide is better by far than creosote.

The cases of tuberculosis in which mercury has marked therapeutic effect are complicated, I believe, by lues or the subject has had it previously. Too often a case of syphilis of the lungs simulates tuberculosis in every way, and this condition exists much oftener than is suspected, and I think that a Wassermann or Noguchi test should be made in every case of tuberculosis whenever that is possible. Doubtless, that is why the iodides are so very helpful in tuberculosis. Congenital syphilis is exceedingly common, much more common than is suspected.

I also employ the vaccines in tuberculosis, for, I have always held, and still do so, that uncomplicated tuberculosis is not such a very dangerous disease; at least it does not kill quickly. I know persons who have had it for years, and they took nothing in particular for it, either. Do not misunderstand. I do not consider that tuberculosis invariably has syphilis at its foundation, however, I do say that this infection—especially the congenital form—is present far more often than is suspected.

S. J. B. COLLINS.

Marion, N. C.

A SAFE AND QUICK METHOD OF TERMINATING INEVITABLE ABORTION

In the first case of incomplete abortion to which I was called, now almost twenty years ago, I came entirely unprepared to the patient's residence and happened to have nothing with me but a broken-off glass vaginal douche-tube and one square-yard of aseptic gauze, besides a piece of sterilized drainage-tubing. Infection probably had set in. The temperature was 100.6° F., much hemorrhage had taken place, uterine contractions were irregular and painful. I learned that the pregnancy had been about three months advanced, and that a fetus had been extruded and was lost; also, that afterbirth had passed while I was left in doubt how much of it had been expelled.

I diagnosed, tentatively, "retained placenta," secured as thorough a vaginal disinfection as possible and gave an intrauterine 1-percent lysol irrigation (less than 1 quart), introducing the end of the irrigator rubber tube, for want of an intrauterine catheter. Then I joined the rubber drainage-tube with the glass douche-nozzle, covering completely the broken edge, thus obtaining a solid stem about 8 to 9 cm. long, and this I introduced into the uterus and fixed it in the vagina, securing the trimmed-down rubber end by a gauze pack. Continued pains started, until three hours later the glass stem had been expelled from the uterus and vagina and a hard, thick piece of placenta, 6 by 8 cm. in diameter, lay in the vagina and was easily removed. I avoided even a digital exploration of the uterine cavity. Loosely packing the well-irrigated vagina with antiseptic gauze fin-

ished this case entirely in a very simple manner, as the patient was instructed to withdraw the pack after twenty-four hours, and do nothing more. On the evening of the day after my first visit, the temperature was 99° F., the following day it was normal.

Although this is merely the brief record of an emergency-treatment, it taught me a safe and speedy method that has served me well many times since then in similar cases.

The most important advantage of such a procedure is, that it obviates unnecessary curettage, generally resorted to in haste by the general practioner as soon as a history of a case of this kind has been obtained. Next to this, it is a great timesaver. Also, narcosis is, as a rule, unnecessary.

In the case described, when not even the most necessary instruments were on hand (one will rarely succeed without a tenaculum-forceps), the procedure adopted was the most efficient method for emptying the uterus. It is a method applicable without risk or danger by the man of little or no experience and who otherwise might do serious injury by an untimely or technically faulty curetting.

Finally, this method is a reliable test by which to reveal the fact, when in doubt, that the uterus is empty. It calls for nothing further than a loose antiseptic vaginal dressing. Certainly, in case of hemorrhage, packing the uterus and cervix with a strip of antiseptic gauze, such as can be bought ready-sterilized from well-known surgical supplies houses will be necessary.

Under the condition that a competent nurse is in charge of the case or that the surgeon can call again after three or four hours, to observe progress or assure himself that the patient was promptly removed to a hospital, I have found this emergency-method of excellent use in suitable cases.

One must have a small assortment of Hegar's hard rubber or hollow glass uterine dilators on hand, which are very easily and quickly sterilized, and select the appropriate size. The fact that the uterine end of the dilator is perfectly blunt and well rounded, the general shape cylindrical, the consistence hard and uniform, assures safety and speed for the method.[1]

There is no danger of perforation, provided the instrument is not held too tightly in the vagina by a close pack and that the surgeon (or nurse) keeps himself in calling distance and withdraws the application no later than in four hours. It will generally be expelled spontaneously in about that time. Pains may be very well eased by means of hypodermics of 1-4 grain of morphine given twice at intervals or else with a few drops of chloroform given occasionally.

The method is applicable in the great many cases in which a woman has interfered with a pregnancy assumed by her to be about eight or ten weeks advanced or shortly after she has missed her menstruation a second time. There are many more women than we are inclined to believe or than we know who succeed in interrupting a pregnancy at that time. Even if we assume that in not one of those cases infection had been absolutely avoided, there is no contraindication to inserting the aseptic hard applicator, considering the short time its action requires (sometimes only one or two hours), if only no other and *incompetent* intrauterine treatment had damaged the uterine wall. A scrutinizing history of the antecedents of the case will guide our deliberations and establish the best plan for our action.

If expert curetting, for the purpose of stopping bleeding, has preceded, and hemorrhage still continues, we can safely conclude that, besides the incomplete abortion, we can have to do with an otherwise diseased or damaged endometrium or uterine muscle, or, as I have found quite a number of times, that there had been no pregnancy (microscope) and, therefore, no products of conception retained and thus no indication for the procedure to which the woman's desire had prompted her.

In case that the curetting was done by such an inexperienced and incompetent hand (others than licensed officials attempt it) that we have every reason to fear that part of the uterus is seriously damaged, the best and only thing to do will be temporary tight tamponade (uterus and cervix), with iodoform gauze, 10 percent, or gauze impregnated with a good substitute for iodoform.

If, upon our arrival, the dilatation is sufficient to admit one finger of a gloved hand into the uterine cavity and not too much time has elapsed since the initial interference, it will depend upon the result of

[1] I prefer the old style of dilators with a handle which prevents their entering too far or disappearing entirely in the uterine cavity.

the digital examination whether the stiff glass rod (or other dilator as previously described) may still be the method of our selection. This not, of course, when we are certain that nothing is contained in the cavity that must come out. If uncertain, the character of pains provoked by the application constitutes a good test, and the fact that nothing is expelled determines conditions.

Besides the objection appertaining to a severely damaged uterus, the method is contraindicated by a diseased endometrium, by para- or perimetritis, metritis, pyosalpinx or any conditions that would contraindicate even the simplest curettage.[2] One must not overlook the possibility of a tubal or other ectopic pregnancy. There is a contraindication also in a patient worn out by other unsuccessful treatment after too much time has been allowed to pass to render efficient muscular action of the uterus an improbable or dangerous thing. Such previous unsuccessful treatment is mostly incompetent curetting or measures directed against an amenorrhea that had been caused by factors other than pregnancy.

When in doubt, the let-alone method, antisepsis, and a loose packing of the cavities is the best treatment.

E. H. F. PIRKNER, M. D.

New York, N. Y.

[Unfortunately, the justly strict and stringent laws tending to discourage the deliberate interruption of pregnancy are disregarded only too frequently, it being a fact that the majority of abortions that the physician is called upon to treat are induced deliberately and not by accident or unavoidable causes. However, practitioners very properly discountenance this form of murder (for, it *is* murder) and accept the responsibility of emptying a pregnant uterus before term only for causes that jeopard the life of the mother, and even then only after consultation.

However, there are cases in which abortion has become inevitable by the time the physician is called in, and then it is incumbent upon him to carry these cases to a favorable termination to the best of his ability and with the least possible risk of danger to the patient. The method practiced by our correspondent impresses us as a very simple and serviceable one, since it promises to promote the emptying of the uterine cavity with but slight risk of infection. For the disinfection of the vaginal passage, the employment of chlorazene solution is clearly indicated, especially in those instances in which the prospective mother has tampered with herself or has trusted her life and health to the unskilled and unclean manipulations of a criminal midwife.—Ed.]

[2] If a man unable to diagnose such conditions, employed my method haphazard, he would be surprised how soon the patient or nurse would call him again, as the pains would undoubtedly become so excessive through the irritation from the intrauterine dilator that it would have to be promptly removed in less than an hour. I can relate no such experience, as I advocate the greatest caution.

FRANCE— A DIAGNOSIS

There seems to be something materially wrong with France. She appears to be dangerously sick. She appears to be slowly dying. According to Paul Deschanel, president of the French Chamber of Deputies, France was the largest nation in Europe up till 1850, but she now occupies the sixth or seventh rank, and, at the end of the present century, she will hardly number 20,000,000 population. This is less than one-third of what by rights it should have been just before the war, if she had kept up with Germany. Again, Professor Levy, one of the most eminent economists in France, has stated that every year 30,000 infants die in France before they are a month old and that 88,000 die before they are a year old.

Here is a gigantic problem! Here is a patient slowly dying from anemia! What may be the cause or causes? Given a great nation having a stationary or decreasing population with an excessive infant mortality, it becomes necessary to find the causes, in the hope that a remedy may be suggested.

In investigating this condition, we find that Doctor Biggs, commissioner of the N. Y. state department of health, says that the tuberculosis death rate in France has been continuously high in the cities, and that it is playing a great part in this gigantic struggle. In evidence of this fact, he says that, before the first of last year, some 86,000 soldiers had been returned to their homes afflicted with active tuberculosis. And, he estimates that 5,000 per month have been returned since then. These, added to those at home and in Germany, he estimates, would make a total of some 500,000 that are actively infected. This would make

France's active tuberculosis infection nearly one-eighth of her population.

These observations point to tuberculosis as a possible cause or one of the causes of the decline of France. And, as these national, or external, symptoms point to tuberculosis, let us examine France for corroborative internal evidence. In order to do so intelligently, let us first outline the disease as it affects different peoples, nations, and races, so that, by doing so, we may be able to form some general rules for our guidance.

Fishberg, who has very carefully investigated the subject, tells us that tuberculosis is a disease of European civilization, that it exists in all European countries, and spreads along the avenues of European social and commercial intercourse; that its virulence is least where the infections are the most numerous, and, that its virulence is greatest when introduced among a people who have been free from tuberculosis infection. He also says that neither color, race nor climate has any influence in exempting a people from its ravages. He also found that all children are born free from the infection and, therefore, were "virgin soil" for the growth of the tubercle-bacilli, and, that children born in and remaining in localities free from tuberculosis remain free from the disease, but, if exposed, such people are readily infected, and, when infected, they are almost sure to die. On the other hand, he found that European children, unless infected immediately after birth, soon acquired more or less of an immunity against its virulence, and that this immunity or partial immunity against the virulence of the disease remained more or less constant throughout their lives. This corroborates Doctor Paquin's observation, that "there is a force in civilized blood that is always militating against the tubercle-bacilli."

Supplementary to these observations on tuberculosis in man, we notice that the more cow's milk is produced, the smaller is the tuberculosis death rate. Example: Wisconsin, our dairy state shows a tuberculosis death rate of only about 8 percent, while our general average is about 25 percent higher. Again, it is noticed, that the more cow's milk there is used, the less is the tuberculosis death rate. Examples: Children use more milk than do adults and their tuberculosis death rate is less than that of adults. With us, about four times as many die between twenty and thirty as during the first ten years of life, the milk-drinking period, etc. And, again, it is noticed that those using little or no milk, if mingling with Europeans and thus exposed to tuberculosis, will have a greater death rate than those who use larger quantities of cow's milk. Examples: The negroes of Mobile and our other large southern cities and the Indians on our small reservations. And, yet, again, it is found that a people having no tuberculosis and having no cows, if exposed, generally become infected and die. Examples: Esquimos brought to this country, the aboriginal Indians taken to Europe. Furthermore, it has been observed that, if the disease be introduced, by Europeans, among a people having no tuberculosis and no cows, the disease soon assumes a virulence that makes it almost an epidemic. Examples: The introduction of the disease among the Esquimos, the aboriginal Indians, the negroes of South Africa.

From this, it will be seen that the more cow's milk there is used, the smaller the tuberculosis death rate. And, since government reports tell us that about 20 percent of our cattle have tuberculosis, it naturally follows that the more milk from tuberculous cows is used, the less the tuberculosis death rate. Therefore Dr. Broaderick's quotation is correct: "The morbidity of tuberculosis in animals and in man does not run parallel; on the contrary, where tuberculosis is widespread among cattle, the mortality in man from this disease is small, and the reverse.

These observations on the influence of cow's milk on the tuberculosis death rate would indicate that there is something—in cow's milk that influences the virulency of the disease, and thus lessens our tuberculosis death rate. As to why cow's milk exerts the marked influence, Doctor Abraham Jacobi expresses himself as follows: "Any mother who has had diphtheria or ny other infectious disease accumulates antitoxins in her blood and in her milk, and thus protects both it and her future nursling." Applying this principle to tuberculosis, it would read: "Any mother who has had tuberculosis accumulates tuberculin (antitoxins) in her blood and in her milk and thus protects both her milk and her future nursling from tuberculosis." And, if applied to the tuberculosis in cows, it would mean that any cow that has had tuberculosis accumulates tuberculin in her milk and thus

protects from tuberculosis infection both her milk and those using her milk.

From this, it will be seen that it is the tuberculin in the milk, both of the mother and the cow, that causes milk to exercise such a direct influence upon the tuberculosis death rate. It is, apparently, the tuberculin in milk that is the factor that gives the partial immunity to the European people. And, its absence, apparently, is that "virgin soil" which is so favorable to the growth of the tubercle-bacilli, causing the disease to be so fatal among infants and among the less civilized nations.

There is another observation that should not be overlooked, and it is, that tuberculin, like antitoxin, is both soluble and comparatively insoluble. The tuberculin in milk, being in solution, in all probability corresponds mostly to the soluble "old tuberculin," of Koch, and, being in solution, would be rapidly excreted.

This causes us to infer that the immunity or partial immunity caused by milk is only a transient immunity, probably not lasting longer than a protective dose of antitoxin. The tuberculin left in the tissues after an infection, on the contrary, should confer more or less of a permanent immunity, according to the virulence of the infection. Further, as above pointed out, only about one-fifth of our cattle have or have had tuberculosis. Thus, while practically all of our mothers have or have had tuberculosis and, therefore, secrete tuberculinized milk, the milk of our cows is only partly tuberculinized; and this lessened supply of tuberculin in cow's milk apparently lessens the immunity after our children are weaned till infection can take place. But, on account of the partial immunity conferred by the use of cow's milk, this infection in children is seldom noticed. Apparently, this is why a person may have the disease and "under favorable circumstances get well without ever knowing that he had tuberculosis." ("U. S. Bulletin" No. 36.)

After becoming of age, and quitting milk as a principal article of diet, many, apparently, lose the partial immunity of childhood and become infected or reinfected and have the disease in a severer form. Some even die from this adult infection, about four times as many dying between twenty and thirty as during the milk-drinking period the first ten years of childhood.

A careful inspection of this synopsis of tuberculosis will show that there is but one cause for an excessive tuberculosis death rate, and that is, the lack of tuberculin in the blood and tissues of a people. The largest tuberculosis death rate occurs among a people who have been free from tuberculosis and who use no cow's milk. The death rate among such a people, according to Hutchinson, may reach 90 percent or more. The next highest rate occurs among those that are living among a people having tuberculosis and, who use little or no cow's milk. Here, the death rate sometimes reaches as high as 30 percent. This is probably about the tuberculosis death rate in France, for. the people of France use very little milk, and what milk they do use apparently has but little tuberculin in it. The people of France use large quantities of wine and cider, but, the use of cow's milk is limited.

It is to be observed that, while the cattle of England have a tuberculosis infection of some 25 percent or more, the cattle on the Jersey Islands have an infection of only about 1 percent, These islands lie in the channel, between France and England and were formerly a part of France. Being so close to France, and having once been a part of France, we would infer that the tuberculosis infection in France would compare closely with that of the Jersey Islands. Further, the cows of France usually are stall-fed instead of pastured, and, therefore, there is but little opportunity for the spread of the disease among them. Again, in some portions, the milk of goats is used. As the latter are free from tuberculosis, their milk would contain no tuberculin. Thus, apparently, the tuberculin supply from milk is very small, so that their tuberculosis death rate should compare closely with that of the Negroes of our large southern cities and of the Indians on our small reservations; a death rate of between 25 and 30 percent.

As to the excessive infantile death rate, much of it may be caused by tuberculosis: but, we are inclined to believe that much of it is caused indirectly by the absurd French marriage laws. Only a civil marriage is recognized as being legal, and then the contracting parties must have the consent of their parents as long as they are under thirty years of age. This, and a lot of other red tape makes the marriage so expensive and difficult that many dispense with or defer the ceremony, and this results in a lot of illegitimacy, which in France reaches 8 or 9 percent of the birth rate. Many such

children, in all probability, have not been receiving the proper food and care. However, we understand that an effort is being made to care for such mothers and children and all needing such attention, including the children of "spite."

From this cursory inspection it may be inferred that the decline of France was due, primarily, to a virulent tuberculosis infection caused by a lack of tuberculin in the blood and tissues, this being caused by the insufficient use of cow's milk or the lack of tuberculosis infection in their cows, or by both; these being more or less influenced by the habit of boiling the milk, thus eliminating the volatile tuberculin observed by Zueblin. Secondarily, we infer the decline to be partially due to the excessive infantile death rate; further, indirectly to the complicated marriage laws and directly to tuberculosis and the lack of proper care.

W. S. GREGORY.

St. Joseph, Mo.

NEURASTHENIA CAUSED BY PROCTITIS. THE CURE

More than three decades ago, I discerned the very grave character of chronic proctitis and sigmoiditis, with their dire local symptoms, primary and secondary; likewise, the baneful primary and secondary systemic symptoms, which I found to be the result of this local disease, a disease peculiarly obscure for many years, and insidious in its progress. Not content with curing the primary and secondary local symptoms of proctitis and sigmoiditis, I sought and devised means to cure the cause as well; and in this way I came upon the track of the primary and secondary systemic symptoms, which I found to be directly traceable to the chronic disease of the lower bowels.

Knowing that my diagnosis was correct and that the local and the home treatment was right, I did not allow time to play any part in the treatment, but continued this for one and a half to three years, if that much time was necessary to eradicate the local disease; even though the local and bodily symptoms had disappeared early in the treatment. Had I erred in diagnosis, the treatment would, surely, have been wrong and even one day or one week of treatment would have been only a waste of time. But, one never wastes time, no matter how long it takes, when reliable judgment is the guide in what to do.

Ignorance and makeshift treatment are twins, born of a mind given to haphazard guessing and then trying because a fee is needed. Primarily this course of action is due to dependence upon inherited embalmed authors, who compile books with material taken from out of date treatises. As an illustration, authors on anal and rectal diseases devote about a hundred pages to the cause and cure of piles, when two lines would have sufficed. Some twenty pages are devoted to pruritus ani, when one line would cover the subject. Over eighty pages are given to anorectal abscess and fistula, when two lines would do. Books, also, on constipation, diarrhea, and digestive troubles are similarly voluminous, in which commercialism, too, plays a goodly part. One must feel sorry for medical students who have to pass examination on such voluminous, commercial, rehashed literature.

Neurasthenia is a debility of the body and mind, often resulting in severe prostration of all the vital forces and eventually ending in death.

I have found that proctitis and sigmoiditis, with their local and systemic primary and secondary symptoms, such as periproctitis, perisigmoiditis, mucous channels, cavities, stasis of the bowels, chronic constipation, diarrhea, intestinal autointoxication, autotoxemia, malassimilation, malnutrition, and anemia, are the cause of neurasthenia.

Since Doctor Lane suggested the use of rock-oil, doctors and laymen have learned much about intestinal autointoxication and its fearful consequences—a pioneer-work that I had been doing for more than a quarter of a century. And this work was connected with another source of extensive poisoning, autotoxemia, which I found to be caused by the absorption of chronic ulcerative and inflammatory exudation, from ten or more inches, of the mucous membrane and muscular structure of the lower bowels, which exudation collects on the mucous membrane in large quantity, especially when the chronic inflammation has become acute. This is not the only source of self-infection, for, the chronic inflammation penetrates the whole structure of the organs and the neighboring tissues all around the rectum and lower portion of the sig-

moid colon, as well as organs and tissues far away; and in all the invaded region a large amount of exudate is absorbed into the system. Is it any wonder that the body and mind will give away and perish, if not properly treated?

Fecal, bacterial, and gaseous intestinal autointoxication does not disturb the nervous system in the same way nor so intensely as autotoxemia resulting from the absorption of inflammatory exudates, which causes very annoying abdominal soreness and aching of the whole body, accompanied with great prostration of body and mind.

Overwork, brainfag, worry, and so forth are not the cause of neurasthenia. The cause is simply the overburdening of the system with noxious material generated through disease and neglect of normal elimination.

The character of the chronic inflammatory exudation varies as all the tissues of the organs are invaded and as the vitality of the system is slowly lowered to the suppurative stage, where the tissues break down and pus is formed in some region of the diseased area.

There is a great amount of inflamed surface from which exudation takes place, and no avenue of escape except by absorption into the system. In some cases, the exudation from subtegumentary and supermuscular channels and cavities about the anus and over the buttocks causes the exudation, from the diseased tissue, of a thick mucus-like substance, through the skin, occasionally foul in odor, often resulting in pruritus ani, scroti, and vulvae. Words cannot describe the local torture of the sufferer from the inflammatory exudation, setting up a burning, scalding, itching and a contraction of the tissues, until great beads of cold sweat flow from the body; the agony often compelling a scratching of the infected regions until exhaustion follows the exquisite pain, the tissues involved becoming in time a cicatricial mass

When we observe the baneful local effect of subtegumentary and supermuscular inflammatory exudation oozing out through the skin, as in pruritus ani, scroti, and vulvae, we can realize what systemic disturbance must take place from the absorption of a large quantity of the exudation into the system. The term "mucus storm" is a familiar expression of mine applied to patients whose chronic inflamed area has become acute and is taxing their body and mind quite to the limit of prostration, and during the accumulation of mucus in the bowels and in channels and cavities in the neighboring tissues. The exudation thrown out on the mucous membrane of the diseased organ is very tenacious and remains for days, tormenting the body and mind extremely, depriving the sufferer of rest and sleep, and requires for its removal quite a vigorous effort for days, which, when accomplished, is followed by relief.

I am quite familiar with the subjects of psychology and psychotherapy, but, so far in my practice, I have never found a sufferer ailing in body and mind from gastrointestinal trouble but that I could find a physical cause for the illness. Yet, many of them had been told that their nervous trouble was in their mind; they were advised to go to the theater, fishing, hunting, traveling, to take a rest-cure, enter a sanitarium, and what not, for diversion of mind. The advisers were not aware that the sufferer's nerves were on fire from self-poisoning and that from the early inception sanity and insanity were constantly contending with each other; the hero or heroine, moreover, of these countless mental battles received no sympathy from doctors, family, friends or attendants, and no relief as each succeeding "mucus storm" swept them from sanity's moorings into the maelstrom of physical and mental despair.

Intestinal autointoxication surely is a protean monster, with an endless train of ills following in its wake; and, added to this, is the great volume of noxious mucous exudation that is absorbed into the body from a large diseased area of the lower bowels and neighboring tissues, which become cicatricial from the long-continued burning, scalding, contracting, irritating, with pain torturing every nerve in the body, banishing rest and sleep. The exhausted mortal drags himself or herself about, trying to be agreeable, all the while hoping and praying for relief, and, fortunately, they can be made well in body and mind.

When the diagnosis of a disease, and its local and systemic symptoms, is properly made, the right treatment is patent, which is simple, and free from deleterious effects on the system, unlike many drugs

in this respect, aiding in every way the normal function of the body.

Of course time lends gravity to a disease, locally and bodily, and the resulting complications must be met to the best of our ability, and with the thorough cooperation of the patient. Twenty, forty, sixty or more years may have passed before the chronic sufferer consults you. Which leads me to wonder when doctors and laymen will pay as early attention, at least, to the lower bowels as they do to the teeth, nose, and throat of children.

Inflammation causes muscular contraction, hence, the bore or canal of the muscular tube called anus, rectum and sigmoid colon is contracted, thus inhibiting passage of feces, gases, and often of water when injected above the more or less strictured region of the organs. In addition to the muscular irritation from inflammation, we have its tenacious, noxious exudation in great quantity cast upon the mucous membrane of the diseased organs; with similar local results as when discharged through the anal integument, setting up an intense irritation, itching, burning, scalding, and painful contraction of the tissues it invades, which, in time, may become cicatricial; all of which indicates the destructiveness of the exudates from chronically diseased tissue. We find stasis and constipation or diarrhea, retained gases, and great accumulation of poisonous ichorous mucus that burns, crimps, and contracts every nerve in the body and dethrones the mind.

To remedy this condition, irrigate the bowels with medicated water at a temperature of 100° to 105° degrees two or three times a day. No harm would follow if the diseased region were irrigated every hour of the day. When bowels are cleaned by means of irrigation, local treatment can be applied to the ulcerated and granulating mucous membrane, and local remedies used.

The author's apparatus for the use of medicated hot water, will stand a temperature of 124° to 134°, or even at 150° F., if the patient desires to use such very hot water. The treatment is continued from one to one and a half hours, once or twice a day, as the patient finds it convenient. The treatment is accomplished while sitting on a toilet-seat.

The local effect of the hot water is antiphlogistic, depurant, soothing, relaxing, stimulating excretion and secretion, equalizing the circulation of the blood, causing rest to all the tissues of the body, and inducing natural sleep. Little or no medicine is given internally, and regulated diet may be prescribed in some cases for a few weeks. The drinking of two to three quarts of water during the day is advised, also frequent sweat-baths, to bring about normal elimination from the skin.

ALCINOUS B. JAMISON.
New York, N. Y.

EPIDEMIC DYSENTERY

When I was a student in college, the man on practice lectured two days on dysentery. He had been "burned" with a siege of epidemic dysentery. This professor said: "Boys, when you get a siege of epidemic dysentery on your hands, you are up against the real thing." He told the truth. I now am in one.

All these cases of dysentery are very much alike. The liver and the upper bowels remain inactive, while the lower bowels try to turn wrong side out. The patient dies from exhaustion and toxemia. If the doctor does not get the case before the third or fourth day, while the mother has tried to stop the condition with soothing syrups and such like, he will encounter a great deal of trouble.

The cemetery now is full of little new graves (not my patients, thanks be, except one) filled by this dreadful disease. Why have I let more of my patients get well than some of my coworkers? Just because I have dared to use what I pleased to use, and that with as much common sense as I could possibly muster up.

I will briefly give my treatment, varied somewhat, of course, from case to case, as indications would seem to dictate.

First, give a purgative that will act quickly and pronouncedly on the liver and the upper bowels, then follow this with a saline laxative. Calomel, podophyllin, and bilein Abbott is a good list. Then I give a teaspoonful of liquid paraffin every three hours. This is better than all the bland emulsions that ever were made to smooth the lining of the intestine and keep the toxins moving out. Lloyd's echinacea and baptisia hold sway over other important symptoms, such as toxemia and ulcerations. In some cases, I have used the combined sulphocarbolates and kept the bowels mov-

ing with saline laxative, one teaspoonful every three hours. If a little patient will not readily take it, put it in a soda pop bottle, and he very likely will take it with relish.

I have used emetine in a limited way, by hypodermic injection, but, have not gained the pronounced good effect from this preparation that some have, or seem to have.

All these patients are very hungry. If you allow them any food and a very little of liquids, the patient will get worse, and, if persisted in, he will die.

T. H. STANDLEE.

Lyra, Tex.

EMETINE IN SPONGY BLEEDING GUMS, RIGGS' DISEASE, AND PYORRHEA

I suppose that I use more emetine than any other one man in the Southwest, and with greatest results. I use up from two to five ampules (½ grain each) during each twenty-four hours, and the result is, in five days I positively observe an entire change in the condition, from the coarse, spongy, bleeding gingival margins to a hard, firm state and pinkish color. The patient awakes with a sweet taste in the mouth in the morning, has a good color in the eyes, headache has stopped entirely, appetite is good, and the urine again is normal in color and quantity; he enjoys good, sound sleep, nerves are steady, and his temperature is normal. Thus have my results been in 258 cases during the eleven months preceding June 30.

Now, what I want to know is as to the proper manner of administering emetine in order to check hemorrhages.

I have also observed the shortening of the duration of typhoid fever from the use of emetine.

To find the vein, I do not risk my experience, but, I draw the plunger and fill the syringe with blood, then I know. There is no guessing. GEO. W. BOWLING.

Oklahoma City, Okla.

[As a rule, a single hypodermic injection of emetine hydrochloride is sufficient to arrest hemorrhage. If it fails, the dose may be repeated within an hour. Since the action of the drug is not prolonged, it is usually advisable to repeat the injection once or twice daily for several days. until the hemorrhagic habit is brought under control. Administered hypodermically, the drug causes no nausea, and the injections are almost painless.

Emetine hydrochloride is supplied by manufacturers in tablet form for hypodermic administration, and in coated tablets for internal use. It is also put up in ampules, in solution ready for injection, the 2 mils (Cc.) of solution contained in each ampule carrying ½ grain of the emetine salt.—ED.]

WHAT ARE THE BEST HYPNOTICS?

Please, tell your "family," through your columns, the best answer you can give to the following queries:

1. What are the best hypnotics? Which is preferable, sulphonal, trional, veronal, chloretone or hyoscin? 2. To what organs of the body are they deleterious? 3. How long can any of them be taken without producing bad effects?

I do not like the bromides, because of their depressing influence; in which respect I regard them as worse than any of the others named. Some physicians will not use veronal. Why? Many others, though good nerve-specialists, consider it to be the safest and best hypnotic. Of course, I do not put morphine and other opiates in the general hypnotic class, as they only should be given where there is great pain and nothing else will relieve. They are dangerous drugs.

I encounter many cases of insomnia, as does every physician; consequently, an exhaustive reply will be greatly appreciated by the "family." Passiflora in all of its preparations has only a suggestive effect and possesses no real hypnotic virtues; it has entirely failed with me in all cases of insomnia.

Perhaps some members of the "family" will take this up. I know many readers would appreciate comments, as the Dispensatory is not satisfactory when it comes to details. I find it hard to determine the actual effects of drugs, and do not think our authors pay enough attention to their action. After having practiced medicine for forty-five years, I can feel more and more my ignorance about the action of drugs.

H. M. OCHILTREE.

Haddam, Kan.

[Dorland's Medical Dictionary defines "hypnotic drug" as one that induces sleep "The true hypnotics produce normal sleep, and include chloral, chloralamid, sulphonal, hypnal, hypnone, paralyehyde, somnal, acetanilid, ural, urethane." This leaves out trional, which is a hypnotic resembling sulphonal. The same dictionary adds: "Hypnotics include also chloroform, opium, ether, and other drugs that have an anodyne effect." However, these latter drugs are better designated as narcotics, that is to say, drugs that produce sleep or stupor and at the same time relieve pain; the meaning of narcosis being stupor or general anesthesia while hypnosis means sleep induced artificially.

The Doctor does well to eliminate the opiates from the class of hypnotics, since, properly, they are to be classed as narcotics, not only inducing sleep but also relieving pain. This differentiation is somewhat at variance with Professor Hare, who does not separate the narcotics from the hypnotics; but, Horatio C. Wood Jr., differentiates the somnifacient drugs in accordance with their action upon the three divisions of cerebral, or mental, activity. He says: "Some drugs act much more powerfully on the perceptive centers, others affect solely the motor area, and, there is a group of drugs the predominant effect of which is a depression of the purely intellectual centers. The members of this last group constitute the true somnifacients, or hypnotics.

"It would seem that all these narcotics are characterized by a greater solubility in fatty vehicles, especially the lipoids of the nervous system, than in water, and it is probable that their physiological effects are in some way dependent upon this physical property. It is evident that, as the central nervous system is composed very largely of substances allied to the fats, any agent which dissolves, by preference, in oils rather than in water will be taken up from the blood stream as it passes through the nerve-centers and thereby tend to accumulate in the central nervous system.

"The narcotics of this group separate themselves sharply from other sleep-producing substances, in the relative feebleness of their action on other portions of the body; for instance, morphine is, in sufficient doses, a powerful hypnotic, but, the quantity required to produce sleep has a marked effect upon glandular secretions and upon the circulation, whereas the methane homologs produce apparently little change in the bodily functions which cannot be attributed to their effects upon the brain. There is, moreover, a close similarity, speaking physiologically, between all the narcotics of the aliphatic series.

"It seems to be a universal tendency of the open-chain compounds to depress the central nervous system. It must not be understood, however, that all of the derivatives of this group are narcotics. So far as known, none of the acids are sleep-producing, and most of the aldehydes are oxidized in the body into their corresponding acids and, therefore, possess no hypnotic power; further, the introduction of several hydroxyl groups, as in the polyatomic alcohols, destroys the narcotic effects, otherwise the sugars would be narcotic instead of nutrient. Generally speaking, the introduction of a halogen, especially chlorine, into their molecule seems to enhance the narcotic power; for instance, ethyl chloride is a more actively depressant than ethyl oxide (ether).

"All of the drugs of this series affect all portions of the central nervous system, acting upon it in inverse order of its development; thus the first portion affected are the intellectual centers in the brain, after the cerebrum is paralyzed, then the reflex centers in the spinal cord, and finally, if sufficient be administered, the vital centers in the medulla.

"The precise field of usefulness as well as the relative safety of the individual members of these narcotics will, evidently, depend upon the ratio between the dose required to affect the brain and that which would paralyze the lower neuron. If the difference between the cerebral depressant and medullary depressant dose be small, it is evident that the drug would be so dangerous as to preclude its usefulness. If the gap between spinal and medullary depression be larger than that between brain and cord, then the drug becomes useful, not only as a sleep-producing agent, but, also for the purpose of quieting convulsions.

"The clinically useful somnifacients may be divided into four groups: (1) Simple aliphatic compounds (paraldehyde); (2)

those containing a chlorine atom (chloral hydrate and chloralformamid); (3) those containing a carbamic ester (urethane and veronal); (4) those containing ethylsulphonic radicals (sulphonmethane and sulphonethylmethane)."

We have believed it useful to excerpt Doctor Wood's interesting remarks on narcotic drugs extensively, for the reason that they may not only prove of interest but of practical service to many of our readers.

This excerpt at the same time answers the second question of our correspondent. As to how long any of these drugs may be taken without producing bad effects, that is a matter that must be solved entirely on the individual merits of each case. In some patients, small doses of a very mild hypnotic will prove quite effective for long periods of time, while in other instances frequent changes from a remedy employed are called for, and it may be pernicious practice to inform the patient what they are taking, because often these persons have a distinct tendency to develop drug-addiction. As a general proposition, whenever drugs that depress the cerebral activity must be prescribed, it will be well to take pains to assure complete functioning of the emunctory organs.

We pass the entire question on to the readers of CLINICAL MEDICINE, hoping that they will take it up in a general discussion. Let us have your opinions, from the viewpoint of practitioners; briefly and concisely.—Ed.]

A CONVENIENT METHOD OF STERILIZING DRINKING-WATER

Every physician should provide himself with Dakin's latest triumph—Halazone. This is a stable, synthetic chemical belonging to the chloramine-group and carrying a benzoic-acid radical. One part in 300,000 parts will completely sterilize drinking-water containing typhoid and colon-bacilli, the cholera-vibrio, and the dysentery-organisms. It is so cheap that there is no reason why every doctor should not keep on hand some of the ready-to-use tablets, and see to it that his patients likewise are supplied—especially those who are depending upon water from wells.

However, there are times when it is a good thing to know of a simple expedient for the disinfection of drinking-water. Here is one: Nearly every doctor in the country now knows about Chlorazene, Dakin's new antiseptic. Not everyone knows that Chlorazene may be used to sterilize drinking-water only, *provided the water must be acidulated.* The addition of lemon-juice or vinegar to water containing Chlorazene increases the latter's sterilizing efficiency nearly ten times. One tablet of Chlorazene, containing 4.6 grains, is sufficient to sterilize about 20 gallons of water. All one has to do is, to dissolve the Chlorazene in the desired amount of water and then make lemonade of the water. This will be free from taste and from all pathogenic germs. Of course the halazone tablets are far more convenient and should be preferred under ordinary circumstances.

HYPNOSIS AS A FACTOR IN MEDICAL TREATMENT

At the time the newspapers published an account of the wonderful performance of a patient of mine while in a hypnotic trance, who sang for Emma Eames and De Gogorza, you asked me to write up that case and others of a like nature. I am, therefore, sending you a brief history of two cases you especially requested; namely, one about a blind man suffering from chronic glaucoma and atrophy of the optic nerve (not my diagnosis), the other, the "living Trilby" case, where the subject was cured of a chronic throat affection.

Case 1. Mr. P. I am describing this case, not because of having achieved a great success, but because it shows the depravity of some persons, and is a clear-cut case that shows why physicians have good reasons for being suspicious and distrustful of suffering humanity. Unhappily, the law of the socalled subjective mind, which causes one quickly to forget suffering and past conditions as soon as the trouble is removed, finds also, is some creatures, an equal elasticity of conscience which enables them to forget gratitude in the larger aspect of the dollar.

Mr. P., brunette, aged about forty, medium height, 150 pounds in weight. Urine test: specific gravity, 1032; sugar present; also acetone and indican. Blood count: 4,000,000 red, 8800 white cells. Internal viscera showed no abnormality, save a slight tenderness over the epigastrium. Tongue: slick, gray coating, showing violet color beneath, thus indicating need for nitric acid,

which was given. Eyeballs were very hard to the touch; absolutely no reaction of the ciliary muscles in either eye. The right eye presented some conjunctivitis, although the patient made no complaint of tenderness to pressure or of smarting. Thorough examination of the spinal reflexes showed no abnormality; heart and lungs were perfect, as were also malleolar and knee reflexes; in fact the man seemed physically perfect, save for the tongue, and the blood and urine derangements above noted.

This example emphasizes the advantage of microscopic and chemical analysis of body-fluids more clearly than most cases, for, strangely enough, of all the physicians who had had this man in charge during the past four years, not one had ever made such an examination. Why medical practice is steadily decreasing while other methods of treatment are rapidly gaining in patronage is not hard to answer. Either too great greed for the dollar, or absolute ignorance, or indifference must be the verdict.

Here we have a patient looking the picture of health, with no previous disease, no symptom of hereditary ailment, apparently well nourished and active, seeking no aid save restoration of sight; the only visible sign of abnormality being in the tongue. Yet, when the blood count and urinalysis is made, we find a decided lack of red corpuscles showing a tendency toward leukemia; then the heavy, sugar-laden urine, with acetone and indican pointing to the cause of slimy, coated tongue.

I gave the usual "clean-up and clean-out" alkaloidal shake. This has come to be a routine with me in every case, no matter what the condition; to this I add the three-day's fast, and then I know I have only the human body to deal with. To me, this is a great comfort, for, I have learned a few things about the body; but, I know next to nothing about treating a walking manure pile. For his general bodily condition I prescribed phosphoalbumin and Fowler's solution. Three days of calcium sulphide, and then began the regular treatment of his eyes by means of manipulation and suggestion. As before stated, there was no pupillary reflex; but after the first treatment there was a perceptible movement of the muscle, and its strength continued steadily to increase until at the end of two weeks it was almost normal.

The man came to me on November 10, and after the first treatment I put him into the mesmeric sleep; but it was not until the 17th that he became fully hypnotized. On the 21st of November he went deep enough to be insensible to the thrust of a pin through his skin. After a treatment he said he could see light from a window in his room; he also said he had for several days been able to make out the outlines of the walk-curbing some distance away. He now wheeled around in his chair, away from the light, and sat holding his hands in his lap, with his head bowed toward them. He asked me a question, and while I was answering it he interrupted me by "I know you will excuse me for interrupting you, doctor, when I tell you I can see my hands very plainly." He tried again and could not see them. Then he stated he had noticed that phenomenon several times —that he could get a glimpse of an object and then, when he tried again, he could not do so. I told him I thought that good proof that the optic nerve was not dead and that in time it would be restored to its former vigor.

We discussed the bright prospects, and then he said he wanted to go home for Thanksgiving dinner but would return the following Tuesday for further treatment. What occurred in that interval I do not know, but Wednesday I received an insulting letter from him, saying he had received no benefit from the treatment and did not intend to pay the rest of the amount I had foolishly allowed him credit for ($19.00), and that he would not return. Whether he concluded the temporary return of vision augured that death of the optic nerve had not taken place and that time, assisted by his sister, who had been present at each treatment, would enable him to beat his bill and get his sight as well, I do not know.

Case 2. Mrs. T. August 2, a mutual friend brought a lady to my office for consultation, but I soon learned that she only wished me to examine her throat, just to please her friend, who had so strongly urged her to come. I humored their whim by making a superficial examination of the throat and nares. I found the tissues edematous and catarrhal, tongue covered by a slick, slimy, pastey, gray, coating, the mucus membrane beneath very anemic. As the patient said she was going to sing at an outdoor entertainment soon, I just touched up the membranes with a favorite astringent solution. I made no recommendations, because the lady said she was at present tak-

ing treatment of a Christian Science healer and preferred to continue, as she fully expected to be cured.

Several weeks passed and I had almost forgotten the incident when the lady again appeared, saying that she had not improved, that she was to sing in three days and her hoarseness and cough were so bad that she felt she would fail. Since, however, the application I had made three weeks ago had made her voice almost clear for several days, perhaps I would treat her throat today. So I made the application, as requested; and the lady then made arrangements to come regularly for treatment.

Careful examination revealed great thickening of the vocal cords; the right cord looked as if it had been stretched like a rubber band until it had broken and a notch cut out of it. Immediately above the cord the tissue was very red, swollen, and boggy-looking, and an ulcer half the size of a ten-cent piece was situated in the left pharynx. In the nasal cavity, the right naris was very narrow, owing to a deflected septum; the tissues being of the same character as the throat. The remainder of the examination, urinalysis, blood count, etc., revealed no abnormality. Indeed, the patient being of robust English stock, full-blooded and active, said she had never been sick a day in her life, and, save for the constant, irritating cough with its attendant hoarseness, she would have no cause for complaint.

There was a semiasthmatic breathing with moist rales in the upper bronchi; the cough was loud and explosive, each paroxysm congesting the face and neck as if every vessel would burst. She said that from her earliest childhood her voice had never been perfectly clear and that the cough, tickling, and congestion had been with her persistently for more than ten years; that the tickling sensation was constantly present and any change of temperature or a whiff of smoke would bring on an uncontrollable spell of coughing; that most of the time she felt that there was a ropy phlegm in the throat which ought to be torn loose, and if this could be accomplished she would be entirely well. The heart beat so hard and rapidly that I suspected that there was a permanent lesion, but subsequent weeks disproved this, for under treatment all the heart symptoms disappeared.

The medical treatment in this case consisted in measures to remove the coating on the tongue by keeping the digestive tract clean, a work not yet wholly accomplished, although nearly so. I am sure this is the only means by which any throat- or nasal disease can be wholly eradicated. While much can be done for diseased membranes by local treatment, yet, unless the parts are bathed in pure blood, no permanent good can result. Pure food is made possible by perfect digestion, only.

I shall not detail the remedies used more than to state in passing that I gave a course of blood-salts, made as near as possible to the analysis given by Denis; then triple arsenates for a time; and, now, iron, lime, and occasionally a cathartic.

During the first two weeks I cleaned the throat and nasal cavities daily with hydrogen dioxide, followed by douches, forced in by a large syringeful of infusion of white-oak bark once daily, and anemopsis sprays thrice daily. Twice daily I swabbed the throat with my usual favorite astringent and tonic, and soon much of the cough and irritation had gone.

Believing, as I do, that, after any disease has become chronic, there is established a body-habit which it is almost impossible to cure unless the mental state is also changed, I suggested to my patient the use of hypnosis and explained what I expected to accomplish. She fell in with my idea at once, and now, that we had a comparatively clean house to work with, suggestion accompanied by a daily sleep of ten minutes was inaugurated. The results were almost magical. The congestion rapidly disappeared and the cough grew less, until nearly absent, except when especially irritated by smoke, etc.

Now we come to the remarkable feature in this case, a phenomenon so wonderful that, today, after more than five months have elapsed, during which time I have daily put her in this hypnotic sleep, we are still learning new phases of mental conditions. And we are keeping record of these séances for future use before psychic-research investigators. I have learned more from this case than from all the books written on psychology.

The case disproves many of the theories regarding hypnosis. It teaches the limitlessness of mental and psychical processes and gives the lie direct to the opponents of this method of curing disease. I will not, however, extend my description more than to show its most marked features. I merely wish to acquaint others with the facts, for

I believe that in the near future this case will not only be discussed by the lay public as a charming novelty, but will be of deep interest to the scientific world as well.

After ten days of hypnosis, one morning I gave the usual suggestion, closing by telling the woman to sleep ten minutes, and stepped back to leave her sleeping. She then burst out in a loud, merry laugh that quite disconcerted me, for I felt that she had perhaps fooled me in pretending to go to sleep; but when she tried to walk I found it was no longer Mrs. T., but an entirely different personality. After some time she managed to say in broken English: "I—marafasha—di Murska I like de leetle instrumen, I sing good sometime—yes. You teach how to say, I come." Then she ceased speaking, and Mrs. T. again became the sleeping subject—convincing proof of which was easily demonstrated.

This performance occurred daily; each time the personality came she eagerly asked to be taught to speak English, and each time she mastered a dozen or more words, so that by the end of a few weeks we got along very nicely.

During this time she would sing a few runs or trill, seeming gradually to gain strength and control, and, at the end of two weeks, she informed us that she was ready to "make much sing" if we would play accompaniments for the songs she liked. We then went to our hotel, and Mike played while di Murska sang; her selections being those songs usually sung by great concert singers.

Later, we procured a hall, and five months have now passed, during which time she has sung daily while in the hypnotic sleep. While in this state her eyes remain closed, and she must be guided as would a blind person. She has no knowledge of what transpires while in the hypnotic state.

While this, of itself, is wonderful and something never before accomplished, yet that is not the great fact that refutes prevalent ideas. Briefly, this is the strange thing: She announced, after two months, that she could go beyond all singers the world has ever known; daily she gained half a tone, till she ran beyond the tones of the piano keyboard, and, since reaching that point, she has contented herself by strengthening and rounding out the higher tones, and now trills on D and E in alto. You can see what this means, when one of the best authorities on vocalization here says that it is a vocal impossibility to trill an octave below this.

Here becomes possible that which the woman can not do in her normal state, although she can easily sing to high A, which is beyond that of any other singer. I am not a musician, hence these tones are not in my mind, and, therefore, no physical or mental preconception exists. Mrs. T. never saw di Murska, yet those who have known the Russian singer say that every act of that character is faithfully portrayed by our subject.

Books teach that subjectives can not reason inductively. Mrs. T., as di Murska, will enter into argument readily and best you with logic. She has had one bad cold, totally incapacitating her for singing in her normal state; in the di Murska condition, however, she sang as clearly as a lark. She makes a trill rising in crescendo, then diminishing till it is heard only a few feet away, then brings up again the tones to full volume; a feat never before accomplished by any singer.

Equally wonderful with this mental phenomenon is the fact that, although even as a child there always was a fog over her voice, hypnosis has entirely removed this, and thus practically stepped in and improved nature's work.

Finally, contrary to present theories, all physical and mental effects have been to her betterment, after more than five months of daily séances in the hypnotic sleep.

F. G. DE STONE.

San Francisco, Cal.

AN OSTEOPATHIC PHYSICIAN SPEAKS

Recently I requested that you discontinue sending CLINICAL MEDICINE when my subscription period expired; however, I wish to revoke that request and will mail the renewal-subscription price in due time.

I have been very much interested in an article in the April number of CLINICAL MEDICINE, page 308, entitled, "The Attitude of the Profession Toward Osteopaths and Chiropractors," written by Dr. T. D. Hard, and also the criticism of the same by Dr. James Hegyessy in the August issue, page 595. I am interested, because I possess a D. O. degree from the College of Osteopathic Physicians and Surgeons of Los Angeles, California.

The statements and insinuations by Doc-

tor Hard, as to the methods by which Osteopaths gets results, are certainly a discredit to a profession that prides itself on its scientific spirit in the acquisition of facts. One could easily imagine from his concluding remarks, to blackball any patient who "bestows his patronage on an Osteopath," that he had been worsted in several therapeutic tilts with some Osteopath. This attitude on the part of the most numerous branch of the medical profession, which makes it unwilling or unable to distinguish between Osteopaths and Osteopaths, is working a great injustice upon sincere and earnest graduates of the Osteopathic College of Los Angeles.

The graduates of this college have to offer the same premedical requirements for matriculation, take the same course in college, with the addition to the curriculum of the subjects peculiar to Osteopathy, pass the same state-board examination for their P. and S. licenses, take the same civil-service examination for internship in the Los Angeles County Hospital that the graduates of the non-osteopathic colleges do, and when they have secured and served their internship of twelve or eighteen months and apply for a commission in the Medical Corps of the U. S. Army they are denied the privilege, not because they are not trained in all the modern therapeutic methods, with the addition of the most rational system of mechanotherapy, but, because they have a D. O. instead of an M. D. degree. I speak from personal experience.

The modern graduate in Osteopathy is progressive, earnest, and sincere, and just as honest and unmercenary as is his M. D. brother; and in this time of trial the cause of liberty and justice is not strengthened by refusing the services, offered in the spirit of patriotism, of well-qualified men just because they have not an M. D. degree.

What is the remedy for such a condition? In pessimism, I might say that no remedy will be found until men put into practice the lesson of charity taught by the Great Teacher. But, that perhaps is too much to ask of men that have mouths to feed and bellies to fill. Yes, much could be done toward its rightening by the administration of simple justice by the powers that be.

JAS. M. WATSON,

Los Angeles, Calif.

HOSPITAL PREPAREDNESS

It is probable that no doctor has ever practiced more than five years without feeling that, if only he had a hospital in which to work, he would be much better able to do surgical work. Let us see whether facts will bear out this wish; and, in order to determine accurately just whether this doctor deserves his hospital, we will ask him to look over his books and tell us how many operations, other than emergency-work, he has performed in that period of five years. "So and so many," each such will answer, "but, if I had hospital accommodations, I could have done two or three times that many." And, he is right!

Here is a locality which should have its hospital, and have it at once. The surgeon is there and, if the results of his operations have demonstrated to his observers that he is able and skilful, it would be an easy matter to have the town build him his hospital—provided he was clever enough to get some third party to talk for him. Many a good young surgeon has ruined what chance he may have had in a location by putting up his own little hospital and trying to run it on a paying basis. This apparent discouragement of surgical enterprise will be better understood when the circumstances following the opening of such a hospital are recalled.

First, there is the opening-stage: several patients in the place, everything bright and new, plenty of good wishes, heart beating high with hope, and all that sort of thing.

The second stage follows very soon after: vague whisperings and rumors—"Mrs. Blank did not get well"—"what does that nurse know about caring for sick people; why, she lived half a mile from me for years and didn't know one medicine from another"—"he thinks he is going to get all the operative work in this town; I'll show him"—and all these nasty slurring innuendoes that are common to the small or medium-sized town.

The third stage shows a brave fight going on against overwhelming odds, the doctor resolved not to give up, and, yet, growing weaker financially and physically from the combined effects of overwork and worry.

Finally this man gives up and closes the doors; the town heaves a sigh of relief and says, "Well, its no more than I expected."

However, very promptly folks discover that the closing of this little hospital was the worst thing that could have happened to them, that they need a hospital badly, but, have only just now discovered their need unfortunately, but it then is too late to do anything, there is no one else of sufficient enterprise to start a movement for another hospital, and, so, the town is obliged to send its cases to B——ville, not so very far away, which has a neat little hospital, supported by subscription, and, more than that, by the good will and assistance of the entire population.

Now to cold business facts, deduced from many years of bitter experience, repeated trials and experiments: Your town is entitled to its hospital, and should have one; but, it should be founded only as a result of careful investigation, study, and the assistance of someone who knows the hospital situation.

This inception of an hospital is a weighty thing and a business all by itself; it is to be approached with respect and caution, as any other great business would be; the merits and needs are to be carefully weighed and the results to be pondered over. It is not a business to jump into and to consider afterward; for, it is for suffering humanity and the betterment of the entire race and, therefore, to be given careful consideration.

The one great fact to be kept in view at present is, that your town is entitled to a hospital, no matter whether it be one of ten beds or fifty; it should exist, and you —*you* who are reading these lines—should take the matter under advisement.

Talk to your fellow townsmen and find out what they have to say. Be sure, though, to tell them that it is not a moneymaking enterprise, that it is for the common good of the community and, hence, should be supported from that source; that it should be a matter of civic pride and for the betterment and advancement of the town. These things are, all of them, facts; only, the people never have thought of them before or, if they have, they have not felt deeply enough to make a start.

Get you bankers interested, get your ministers interested, and especially get the ladies interested; for, the hospital is only the sickroom multiplied by twenty-five or fifty—and who better understands the care of a sickroom than do our women.

Now you have made your start, but, after a week or so you will meet with your first difficulties, in encountering the indifferent people and the pessimists. Just check them off your list, smile and pass on to the next; they will soon come trailing along with the remark that they "did not understand the matter" and an "Oh, well, if you had told me that." Then smile again and softly take them by the hand; tell them you are glad they have come aboard; but, for heaven's sake, do not look wise and make them feel that you knew they would come in. anyway.

If your difficulties grow too strong and begin to discourage you, let the matter rest for a while; for, you have started a line of thought that will not die out, and others now are thinking the same as you do. Presently the movement will start up again, and this time with more vigor and interest, and almost before you are aware of the progress made a committee will have been appointed to look up a good spot for their new hospital.

It would be better that the physician himself did not start this movement, but, rather, could interest some good businessman who stands well in the town, and then keep in touch with the movement and give suitable encouragement from time to time. The other doctors will be liable to think that you are fixing something up for your own advancement and profit; and this would have the unhappy effect of turning them against the project. It should be remembered in this connection that one knocker can do more harm than a dozen boosters can overcome. So, be careful and diplomatic in the early stages.

Maybe your difficulty will be money. Well, there are a dozen plans whereby you can raise the necessary funds and, moreover, have the donor consider it a privilege to contribute. All this takes experience and *finesse* and belongs to the realm of the organizer who is skilled in such matters, having been through "several" campaigns before and knowing the methods of approach.

Keep in mind all the time that the enterprise is for civic betterment—that it is a town affair, a matter in which every last person should take an interest and should constitute himself a committee of one to talk to his friends and boost the project.

This will get away from the oft-repeated remark, "How much is So and So going to get out of this?" and put the plan on that high plane that it properly should occupy. If you do not consistently keep the campaign up to this high moral mark, it will not succeed; for, the minute jealous bickerings enter in and the high purposes of the hospital foundation are allowed to sag, just that minute marks the beginning of the end, and your neighboring town ten miles away will proceed to demonstrate that they have bigger and better people than yours have, and those people will furnish their demonstration by establishing a hospital—to your lasting disappointment and shame.

SAMUEL C. BEACH.

Chicago, Ill.

[The problem of the small-community hospital is a vital one, and we are glad, indeed, that Doctor Beach has opened a discussion regarding it. The readers of this journal, especially those practicing in small communities, should be interested in this subject. Therefore, let us have your ideas and let us have a good and general discussion.—ED.]

SUGGESTIONS FOR TREATING INFANTILE PARALYSIS

The prevalence of infantile paralysis at Davenport, Iowa, and a letter of inquiry from Dr. E. T. McGuire of Mead, Nebraska, prompt me to repeat in substance the treatment I recommended in *The Medical World* a year or so ago. It is hard to understand the general pessimism of the medical profession on this subject, for, the disease is just as amenable to efficient therapeutic measures as are any of the acute infectious diseases with which we have to deal.

The indications for treatment in the first stage of the malady are as follows:

1. Isolation of the patient in a cool, well ventilated room.
2. A thorough cleanout.
3. Equalization of circulation.
4. Reduction of cerebrospinal congestion and control of nervous symptoms.

I combine the eliminants with the circulation equalizers. Thus, for a patient of five I give this prescription:

Calomel and phenolphthalen 1/10 gr. each.....
.....10 tablets
Defervescent Compound No. 2....10 granules
Hyoscyamin .....10 granules
Calcium Sulphide, gr. 1/6.....10 granules
Sig. One of each, once an hour, to effect, or until all are taken. A few hours after the last dose give two or three doses of salithia, at hour-intervals. Also flush colon with normal saline solution.

After the patient is well cleaned out I order the defervescent compound as needed for fever and continue the calcium sulphide in ½ grain doses every two or three hours, and the salithia as often as required. I also prescribe Merrell's ferro-salicylate, a teaspoonful every three hours. This is a standard remedy, and its effect on this disease is much better than some of the remedies that have been proposed by those considered highest in authority.

To control the cerebrospinal congestion, gelsemium is the best remedy. I use it in this combination:

Specific tincture gelsemium.....dr. ½
Strontium iodide.....dr. 1
Strontium bromide.....drs. 2
Elixir lactated pepsin, q. s. ad.....ozs. 3
M Sig. Teaspoonful every one to six hours or often enough to control the symptoms.

If the above plan is efficiently applied the disease can usually be controlled and there will be very few cases of paralysis and no deaths.

Miles, Iowa. W. A. MARNER.

[These suggestions are excellent, and we hope they will be taken to heart by the readers of the CLINICAL MEDICINE. Doubtless, many think they can improve upon the method of treatment which Doctor Marner outlines. If so, the privilege is theirs. We have made a suggestion in an editorial upon poliomyelitis which we are publishing in this issue, page 706. In a nutshell, it is this: For the prevention of poliomyelitis, the physician should use oil sprays of dichloramine-T in 2 percent solution. The solvent is a mixture of chlorinated eucalyptol and chlorinated paraffin oil. This antiseptic was introduced by Dr. H. D. Dakin, whose name is now known to every physician. The new oil-soluble antiseptic promises to be of the utmost value, not only in poliomyelitis, but also in meningitis, diphtheria, scarlet fever, measles, and the various acute infectious diseases finding their origin and mode of transmission in the nasal and pharyngeal mucosa.—ED.]

In the World War

THE AMBULANCE-CORPS TRAINING-CAMP

Comparatively few of the medical profession seem to be familiar with the methods employed by our Government to train men for medicomilitary service. Most of us know that when a young man enters the Medical Corps or the Medical Reserve Corps of the United States Army he is likely to be sent to Ft. Benjamin Harrison, in Indiana, or to Ft. Riley, in Kansas, and given a course of instruction in his duties; and some of us have heard of the Ambulance-Corps Training-Camp at Allentown, Pennsylvania. Yet, comparatively few seem to be familiar with the work that is being done in the latter place.

Now, for a few words of explanation, by way of introduction. The ambulance service of the American Army is really an out-

Ambulances—3,200 ordered.

growth of the French ambulance service, in which so many young American collegemen have already served. When the time came to organize our field medical service, it was, naturally enough, developed along French lines, in small units, each unit containing a total of 45 enlisted men, commanded by a lieutenant. In this unit, there are three sergeants, one corporal, two mechanics, two cooks and 37 privates. Four units constitute a company commanded by a captain, and five companies constitute a battalion, commanded by a captain or a major. Each unit is provided with 20 Ford automobiles, 3 Packard trucks, and one officers' car. Kitchen-trailers are provided, to supply hot meals to the men on the road. The "ambulance" is essentially a field-service organization.

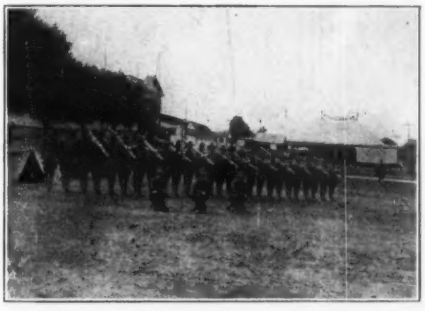
For the training of the men for this service, the United States has established a camp at Allentown, Pennsylvania. It is situated on the fair-grounds in the outskirts of this little Pennsylvania mountain-city. A few weeks ago, two members of the editorial staff of CLINICAL MEDICINE, Doctor Abbott and Doctor Burdick, had the privilege of visiting this camp and inspecting it with Major Richard Slee, who is now second in command at this camp. Major Slee, as you will recall, is also a member of the editorial staff of this journal.

When this camp was opened some two or three months ago, the grounds now used were very much like those of any other country fair-ground. There were several wooden buildings, the largest being the grandstand, which looked out upon the usual race-track. There was a good water supply, but, no provision had been made for sewage disposal. The task of putting this ground in shape for the reception of men was assigned to Major (now Colonel) Elbert E. Persons, who came to the United States from the Panama Canal Zone, with the expectation of being sent directly to Europe. His principal aid was Major (now Lieutenant-Colonel) Percy T. Jones, also of the regular army. Within a few weeks, men and material began to arrive, and in a very short time several thousand young men, mostly recruited from our colleges, were domiciled in the camp. At the time we visited it, nearly 5000 young men were there and about 1000 had already been sent to France.

These young men have sleeping-quarters in wooden buildings (which are a part of the fair-ground equipment) and in tents. Even the grandstand itself was utilized for

this purpose. The sloping amphitheater fitted up with cots and hung with blankets, clothing, and the extremely varied equipment of these young men in khaki presented a rather peculiar sight.

The camp dining-room is a large hall, immediately beneath the grandstand. In this room, seats are provided for 2700 men, all of whom can sit down to eat at the same time, the officers being provided with tables and benches at one end of this hall. At mess call, half of the men are provided for at the first table, the other half getting their meal later. We had our Sunday dinner with the officers. If it is a fair sample (as we understand it was) of the food provided for the men of our Army, they have no reason to complain. We had stewed chicken, corn on the cob, boiled sweet-potatoes, bread and butter (the "butter" was oleomargarine), ice-cream, and cake, and there was an abundance of everything. Some idea of the task involved in feeding the men can be gained when it is understood that 10,500 eggs are required when eggs are served for breakfast; and about 10,000 ears of corn, and 2000 pounds of chicken for the Sunday dinner. When beef is served, 4000 pounds (four whole steers) are necessary to provide meat for one meal.



Stretcher bearers.

Everything about the camp is absolutely clean, the "spick-and-spanness" being due to the watchful eye of Major Slee, who is sanitary officer (also post-exchange officer, police officer, and summary-court officer). Because of the absence of a sewage-system, it was necessary to provide latrines for this camp. These are located at frequent intervals, are protected by canvas, and are absolutely free from odor. The latrines are burned out every day with straw and deodorized with cresol.

An interesting lesson in economy was given in the record of the revenue obtained from the sale of the waste and garbage. This is all carefully sorted and disposed of so profitably that $1000 a month extra is obtained in this way; this being credited to the mess-account, so that every man's care-

Shelter tents—"dog" or "pup" tents.

fulness contributes just so much more to the setting of the table.

Life in the Ambulance-Corps training-camp is, of course, strenuous. The day begins at 5:30 in the morning and ends at 11:00 o'clock at night. Every minute seems to be provided for. There are exercises, drills, lectures, assemblies, and, of course, the inevitable and welcome calls to "chow." Drills not only include the ordinary infantry drills of the soldier, but, litter-drills, ambulance-drills, and the specialized instruction necessary to fit these men to attend to the needs of wounded soldiers on the battlefield.

We saw a large number of new ambulances, all ready to send abroad. All of these had the Ford chassis, the body being simple and ingenious, and, of course, absolutely uniform in all the cars. It was interesting to us that, in making the bodies, beaver board had been very largely employed. The Ford car is used, because experience has shown that in driving over the rough, shelltorn roads of northern France it is much more practical than are the heavier cars; in fact, the Ford car can go pretty much everywhere. Of these cars, 3200 had already been purchased, and we were informed that an order for an equal number of more cars had been placed.

The presiding genius of this great camp is Colonel Persons. The Colonel is truly

a wonderful man, and his remarkable genius for organization and his magnetic qualities have won the loyal support of all his associates. He has a very able staff of men. You have heard of Major Slee, who

Major Richard Slee, M. R. C. U. S.

is well known to the readers of this journal. Colonel Jones, at the time we visited Allentown, had left for France with a large contingent. Others were expecting to go soon.

We shall not attempt to enumerate all the officers in this camp, a number of whom we had the pleasure of meeting; but, they were all delightful fellows and, with very few exceptions, men taken directly from civil life, where most of them had already earned distinction. Some of the best-known surgeons in the country are doing more or less menial work in the Allentown camp, and they are doing it cheerfully and with enthusiasm. It was rather significant that the most strenuous as well as the most important work is being done by the older men—men of fifty or thereabout.

The ambulance-service is in good hands and we anticipate for it a glorious career on the bloody fields of France. The work is perilous, but, one that appeals to the imagination, and inspires the courage and devotion of the fine young men of our colleges, who, be it said to their honor, are not seeking the easy tasks in this great war, but, the hard and dangerous ones, as witness the eagerness with which they are flocking into the aviation-schools, the officers' training-camps, and great camps like this one at Allentown.

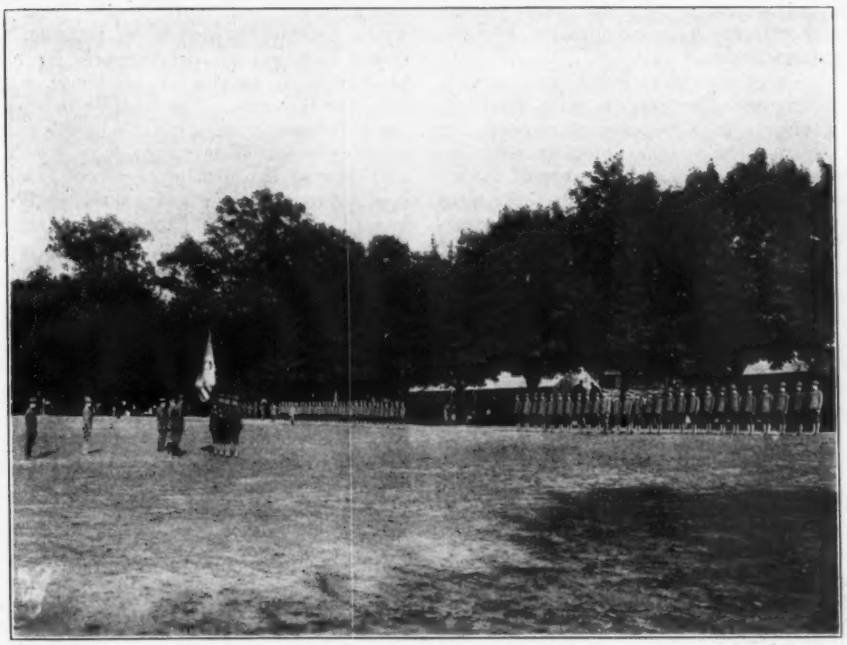
DRAFT EXAMINATIONS.

Last month Doctor Burdick, of the editorial staff of this journal, contributed an article upon the draft examinations. Naturally, he is greatly interested in the experiences of others wherever recorded, and particularly so in an editorial upon draft examinations that appeared in the September number of *The Journal of the Michigan State Medical Society*. The experiences recorded in that editorial are very similar to those of the editor of CLINICAL MEDICINE. Believing that many of our

Col. Elbert E. Persons, Organizer and Commanding Officer.

readers will enjoy this editorial, it is here reproduced:

"We have passed through a two weeks' period of physical examinations of men who have been called by the enactments of



Presentation of Colors.

the Draft Law. During that period, we have seen 1000 men and have noted the results of the physical tests. We confess to revolutionary experiences, and have been impressed with the defects that have been encountered. Former opinions have been shattered and new actualities have taken their places. It has been a wonderful event, that has stimulated a desire to see a group of analyses of the results and impressions of others who have served in like capacity. We should, indeed, desire a general tabulation, and to that end invite correspondence.

"A few of the striking facts encountered: One out of every six men had defective teeth that would disqualify. Some of these sets of teeth were merely decayed 'shells' filled with food debris and decomposition. One out of every four men with defective teeth presented a history or signs of cervical adenitis, tonsillar infection, and a heart lesion, with more or less joint involvement, and a history of what the individual called 'rheumatism.' There is a crying need of education on the care of the teeth. The wonder is that, with the average dental defects, greater physical disease and constitutional disorders do not manifest themselves.

"The prevalence of tuberculosis, as demonstrated by recent survey statistics, was not detected, though special attention was given to pulmonary signs and symptoms. These boys were exceptionally free from pulmonary tuberculous foci.

"Inguinal hernia was frequently encountered. Many were only partial, with the individual unconscious of the fact that the 'lump' was a hernia.

"A well-marked varicocele, usually left, was found in one out of every four.

"In one group of 500, one open syphilitic chancre and but six cases of acute gonorrhea were detected.

"Undescended testicles were noted unilaterally in six and bilaterally in two. One man was found to possess three testicles.

"The average vision was good, with a well-established percentage of 20/20ths in one eye and 20/30ths in the other eye. Quite a few wore glasses, who had normal distance- and reading-vision. On inquiry, most of the 'spectacle wearers' had been supplied with glasses by untrained or unscrupulous optometrists. But three cases

of malingering as to vision were encountered and proven, by examination, with refracting lenses.

"Hemorrhoids were infrequent, as were also osteomyelitic diseases with discharging sinus. In 1,000 men, there were but four cases of vicious union or ankylosis following fracture, and all were of the elbow-joint. In the same group, there were five cases of spinal curvature of disqualifying degree.

"The foregoing were the prominent impressions received. Standing foremost, however, were the defective teeth and the neglect of proper dental work and oral hygiene. There is a woful need of education. Physicians must become aggressively active and direct greater inquiry, when consulted by patients, as to the condition of the teeth. When found defective, the individual should be impressed with the need of securing proper dental attention.

"It is our hope that this brief summarization will stimulate a study of these examination-blanks in the several Michigan districts, with the compilation of the deductions in the form of a paper that we shall welcome for publication."

In the article, in CLINICAL MEDICINE, upon this subject (September, p. 681), there occur several statements that call for correction, the most striking and important, probably, being those as to the number of leaky hearts that were encountered. Upon reviewing the situation, this writer is convinced that the number of these cases was at least double that stated in that article, and probably considerably more. Also, the number of rejections was higher than there stated. The docket of the Chicago Local Board 59, now completed, shows that out of 867 examinations there were 242 rejections for physical defects, or slightly less than 30 percent.

RELIEF AT LAST FROM THE GERMAN CHEMICAL-MONOPOLY

Did you notice, dear reader, that a few days ago congress passed the Adamson Bill—the socalled "trading with the enemy act"? There is one feature of the bill which is of extreme interest to every physician, namely, the one which, during the continuance of the war, sets aside patents held by an enemy or an ally of an enemy. This bill undoubtedly will be signed by the president. It gives to the Federal Trade Commission the power to issue licenses to American manufacturers for the production of articles or substances patented in Germany. The licensee is given the privilege of manufacturing such patented articles, and, in return, is to pay the custodian of the alien property not to exceed 5 percent. of the gross sums received by him from the sale of the article covered by the patent.

No doubt this law will greatly stimulate the production of patented chemicals in America. Thus, for instance, several firms already are preparing to manufacture salvarsan; and other well-known synthetic chemicals will be taken up quickly and placed on the market with little delay. There can be little doubt that once the manufacture of medicinal chemicals is placed on a firm basis in the United States, the business will become a permanent one.

We now realize the extreme value of chemistry to the nation. Not only are we concerned in the ability of American manufacturers to make products, now manufactured abroad, in quantities sufficient to meet the American demand, but, we also know that the manufacture of ammunition is inseparably bound up with the manufacture of synthetic chemicals. Germany was able to meet her enemies and destroy them at the beginning of the war, for one reason, because she had provided for this contingency. As an evidence of what chemistry has meant to Germany, we quote herewith a statement published in a recent newspaper:

"The recent closer combination of dyestuff industries of Germany with the express purpose of meeting and destroying American competition after the war is interesting as showing German methods. For a number of years the dyestuff industry of Germany was virtually controlled by six great companies, some of these companies employing as many as 500 chemists in research work. In 1915 these six companies made an agreement looking to a still closer alliance, not only for the distribution of the product, but for the distribution of ideas and trade secrets.

"For years these great commercial companies supplied all the countries of the world, not only with dyestuffs and other chemical products, but with medicines discovered by their chemists and made from

coal tar, and these, although really nothing more than patent medicines, were put upon the market as new and great and beneficial discoveries in medicine. The Badische Aniline and Soda Fabrik, with a capital of 54,000,000 marks, has paid dividends in the ten years from 1903 to 1913 averaging more than 26 percent.

"The Farbwerke Meister Lucius and Bruning at Hoechst, near Frankfort, during the same period, with a capital of 50,000,000 marks, has paid dividends averaging more than 27 percent., and the chemical works of Bayer & Company, near Cologne, during the same period, with a capital of 54,000,000 marks, has paid dividends averaging more than 30 percent."

FOR A MISSOURI BROTHER

A Missouri reader of CLINICAL MEDICINE has sent us a very interesting description of his experience as a member of an exemption-board. The letter was written by way of comment upon Doctor Burdick's article on the same topic published last month. In some way, this article has been misplaced, so, unable to recall the Doctor's name, we take this way of letting him know that we shall be very happy to have him favor us with a duplicate of his article, for publication in this journal. We apologize for losing it. It was read at once and greatly appreciated.

ANOTHER LETTER FROM DOCTOR KELLEY

I want to say something concerning getting into the war-game. Every physician, like every citizen, should get into it somewhere; and let us have it done with as promptly as possible and well done. It does not follow that everyone should come to France. Some can be more useful in the home territory; however, everyone should exert himself distinctly and forcefully in the great task that is before the country.

Those physicians who come to France should do so in connection with the army or the American Red Cross (now a part of the army) or have a definite place and function upon arriving here. This does not mean, of course, that all should come with large and indivisible hospital-units or surgical units. The authorities here often find it useful to divide organizations or use individuals instead of entire teams.

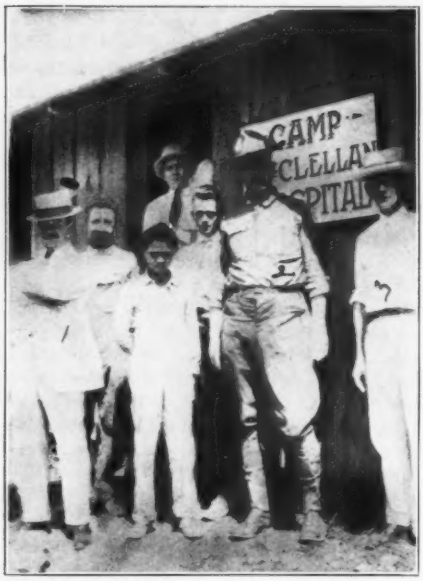
As the war goes on and as the United States is coming into the field, a movement toward more close and complete organization is developing, so that now there is less opportunity than formerly for desultory engagement in military surgical positions.

It is well to bring along one's entire outfit, in the way of clothing and personal belongings, for, everything is expensive here and often sizes and varieties are limited, while shopping involves great loss of time. Living is expensive here and food is not had in abundance nor in variety. I do not mean that anybody is starving, for, that is not the case. However, portions served, quality, kinds, and prices are not as they were before the war. This is especially marked outside the war-zone. In the war-zone, there are not the restrictions on meat and sugar that are in force outside of it, but, then, one cannot go there just for to live there. One must show good reasons for his being there on war-business, in order to gain admittance, and it is a difficult matter to obtain the necessary papers.

Whoever comes should arrange his affairs for staying a long time. Nothing is done in a hurry here. A little formality that one should think could easily be gone through with in perhaps three hours is likely to consume three weeks and may be as long as three months. As many as can should lay their plans to remain in the service for at least—and I don't wish to frighten you—two years; and it may be longer than that. At the present rate of progress, it does not appear to me that the war can end soon, unless there is some great unlooked-for development, such as was the revolution in Russia. I have seen how slow progress is in trench warfare, when I was exploring pulverized towns or flew over the trench-scarred battlefields of two years ago in observation-balloons, or was listening to the thunders of the guns along the battlefront of today. The position of the terrain has changed only a few kilometers in two years.

All this brings one to a realization of the strength and stubborn resistance of the enemy. As for starving him out, it is not easy to starve an industrious and frugal people in a fertile country. I have been astonished at the large amount of

land under cultivation and the splendid condition of the crops right up to within a short distance of the firing lines. The peasants, the majority of them women—but, as strong as men—go right on tilling the soil, and they scarcely pause in their labors to watch an aircraft-fight above



At Camp McClellan.

1. Dr. R. L. Hughes, Chief Surgeon; 2. 1st Lieutenant R. C. Evans, M. R. C. U. S.; 3. Dr. Q. L. Nourse, Resident Surgeon.

their heads; in fact, they seem to be stimulated rather than frightened by the sound of cannonading. And I think it likely that the same condition prevails on the German side of the lines.

Finishing this war is not a pleasantly easy job ahead, and we may as well settle into the traces for a long pull. The sooner enough of us get ourselves into the war-harness and are trained for the pull, the sooner it will be all over.

For the young man who can afford the time (because he is young) it will be a wonderful experience, combining, as it does, foreign travel and language, military, medical and surgical observation among the soldiers of many nations, and the consciousness that he is taking the part of a man in the greatest war of all history, serving his country and mankind in a land devoted to liberty, equality, fraternity.

S. W. KELLEY.

Paris, France.

DOCTOR NOURSE AT CAMP McCLELLAN

I have been acting as surgeon in charge of emergency hospital attached to the construction company building the Camp McClellan troop quarters.

Have been here a month now and do not know just how long the work will last. It has been an exceedingly strenuous position—in fact still is—although less arduous than at first.

A. L. NOURSE.

Camp McClellan, Ala.

TO THE SLACKER

By W. E. Whiteside

Lives there a man with soul so small
He ne'er has heard his country's call
  When threatened by a foe?
Who would not risk his mortal life
Or leave at home a faithful wife
  When called upon to go?

Who'd see his nation on its knees,
And would not cross the briny seas
  To seal the tyrant's fate;
Who'd live a life of ease and fun,
While some poor widow sends her son
  To die, if need be, for the state?

Whose weal means more to him than right.
Whose pride forbids that he should fight
  His own fair land to save;
Who would not lift a hand to stay
The blood-drunk king now held at bay
  By French and English brave?

Who would enjoy this nation's wealth,
Its guaranty of life and health,
And, yet, refuse to aid the cause
That has provided mankind laws
  To take the place of brutal power;
Whose ease means more to him by far
Than wrongs avenged by righteous war,
  Or even allow his dreams disturbed for
    one short hour?

If such there be in our fair land,
Who will not gladly lend a hand
Or lay upon this country's shrine
The product of his farm or mine,
Then ostracize him from his home,
  His country and his hearth;
And send him back to "Kaiser Land,"
  To fertilize the earth.

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

[*Continued from September issue, page* 692.]

MANY times since I was a lad have I read the works of Henry Thoreau, and as the years advance I enjoy him more. This last spring and summer I have been reading "Spring" and "Summer." It has been my practice of late to read a chapter or more every morning before breakfast. I think I have been able to go about my daily work more philosophically, with a calmer and saner mind for having read each day a little from Thoreau. To me, he is ever intensely interesting, whether he is telling us with childlike enthusiasm of a new flower found in the forest nooks or, with the trained eye of a landscape painter, describing the light of sunset or the color of a bird's wing, or recording his aspirations toward the ideal friendship, he is ever the same unique character.

Thoreau not only was a writer of originality and poetical feeling, not merely a recluse, as many people are accustomed to picture him, but a man thoroughly and consciously genuine in all relations in which he stood. He was a living protest, too, against all that in our modern social system tends to obliterate the individual. Of course, he went beyond all reason, at times; yet, in general, he seems to have striven never to let himself become a mere cog or crank in the social machine, nor ever to be narrowed into the mere poet, but, to be always and before everything else a true man, living life for a man's objects.

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There may have been much that was misty and unreal, much, also, that was forced and overdone in the thought and life of the Concord transcendalists. Nevertheless, in the midst of it all, they—and Thoreau preeminently—were emphasizing truths too commonly forgotten by the country in which they lived. They were preachers and practicers of the true temperance in the midst of a society essentially dissipated in its intellectual and commercial as well as its purely social life—a society that made life an intoxication, although not so much of an intoxication as it is today. Some day I shall write something of Concord, its history and its celebrities. Today I will write only of Thoreau.

How few of the people with whom I am acquainted are familiar with his writings; and, yet, there is scarcely in the history of American literature so unique and individual a figure as Thoreau, after we have excepted Emerson and Hawthorne. He was a creature of contradictions, in whom our complex human nature was more complex than usual. He loved solitude, and yet, he delighted in companionship. To some woes, he was as stolid and unsympathetic as an Indian. He had small pity for headaches or heartaches, and, yet, upon occasions he could be as tender as a woman. He resented, yet, would not refute, a false accusation. He had a spiritual dignity that was almost arrogance and which made him feel that no man's opinion was so important to him as his own. Every one of his attributes was many-sided; and it is a matter of curious interest to know what factors of descent, culture, occupation, station of life went to the making up of this character, so singular and so strong. To those who wish to know more of this man I recommend a book, recently published, on Thoreau, written by Frank B. Sanborn, of Concord.

Thoreau was, by nature, a stoic. He not only did not complain, but he did not feel like complaining. He accepted any melancholy mood as a luxury, as one enjoys minor music. He voyaged about his river in December, when the drops froze on the oar, as cheerily as in June, and he called the icicles "toys of immortal water, alive even to the superficies." His interest in swamps and bogs was keen, he loved everything that was wild. He must have been, unconsciously perhaps, an evolutionist. All growing things were alive to him. He

hated to hurt a flower, and he wrote of his walks:

"Kings unborn shall walk with me
And the poor grass shall plot and plan
What it will do when it is man."

While, as I said, he was indifferent to the headaches and small megrims of his friends, great things moved him greatly. He was made ill by the John Brown tragedy, and the war of the Rebellion depressed him fearfully—he used to say he could never get well while it lasted.

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His high moral purpose never deserted him. Early in life, he resolved to read no book, take no walk, undertake no enterprise but such as he could endure to give an account of to himself. His moral qualities were the very foundation of his character, on which all the rest was built. Truth, he said, before all things, integrity above all—purity in all, even the faintest thought. A man who lived thus was, certainly, a religious soul; but, he had no creed, unless it was one so catholic as to embrace the world. He could sympathize with all religions, warm himself at every altar-fire. A friend once described to me a conversation to which he listened, in Concord, in Thoreau's time. A more orthodox person, a woman, than it was usual to meet in those transcendental gatherings chanced to be of the party, and the talk turned on the tendencies of modern thought. "It seems to me we are going backward to paganism," said the orthodox guest. Thoreau looked at her with his keen eyes. "Say, rather forward to paganism, madam," he said, with a solemn bow. He believed we could not worship too much. "I would fain improve every opportunity to wonder and worship," he wrote, "as a sunflower welcomes the light." "God could not be unkind to me, if he should try," was a quaint expression of his faith.

He declined all polite shams. He was not fond of visiting; however, when invited, he never would say it was not convenient or not in his power or that he regretted, but, always tell the unmitigated truth—"I do not want to go." Nevertheless, he had friends whose homes he frequented and whom he loved with a steadfast affection. To the place of his birth, he was as constant as the most faithful of lovers. He found among the woods and fields of Concord unlimited material for his work as a naturalist and continued delight for his perceptions as a poet. The river was his great blessing: on it he boated, in season and out of season, and whenever he chose he would put into shore to examine an animal or plant or get a wider view.

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I have read a few criticisms on Thoreau that indicate clearly how misguided, even ungenerous, are certain judgments of the character, aims and life of this unique thinker and author. It has been seriously asserted that he was "an ambitionless, idle dreamer; that he was lazy and would not work; that he lived the life of a recluse and denied himself the luxuries and privileges of society, because he had not "nerve" to face the battle of life; and that the value of all that he wrote has been greatly overestimated. This is a formidable arraignment; yet, as the expression of a sincere opinion, it is entitled to respectful consideration. Let us examine the counts of the indictment, one by one.

As to Thoreau's want of ambition, that accusation may readily be granted. We not only have Emerson's explicit and authoritative charge to this effect (contained in his biographical essay), but, in the following extract from "Excursions," we find internal evidence of Thoreau's assent to this charge: "When I detect a beauty in any of the recesses of nature, I am reminded, by the serene and retired spirit in which it requires to be contemplated, of the inexpressible privacy of a life—how silent and unambitious it is." Yet, is there not also here a touching defense of his self-contained, unobtrusive life, conveying a gentle rebuke to those who regard outward success and fame the criterion of excellence?

In the worldly acceptation of the term, Thoreau certainly lacked ambition. What of it? If the repose of a philosopher's days, accompanied by manly independence, was more conducive to his spiritual development, is there any law of the till or the forum to gainsay his honest predilection? Because, disdaining "that last infirmity of noble mind" and refusing to be dragged into the glare of public scrutiny, he sought "the cool, sequestered vale of life," is his worth less positive, his service to letters less eminent or his achievement in behalf of natural goodness and truth any the less admirable? "If I do not keep step with my companions,"

he says, "it is because I hear a different drummer."

Respecting his work—that is to say, labor, as popularly understood—it is amazing that Thoreau's actual profession, a perfectly practical bread-and-butter affair, should have been so persistently ignored by his detractors. It was common enough to meet him in remote districts of his rural home shouldering his theodolite; and his constant patronage was evidence that his work was well and faithfully done, although in its performance he observed many things not entered with his logarithms. Thoreau was no idler, no dreamer, as opposed to the man of action. Conformity with the prevailing opinions of others is subjectively comfortable; still, in the evolution of human feeling, free play must be given to every diversity of taste and temperament.

Further, it is averred—with what reason I am at a loss to conjecture—that Thoreau lived the life of a recluse, the cause of his retirement being his reluctance to face the struggle for existence among men. All wrong! The hermitage by Walden Lake was but a transient episode in his career, lasting a trifle over two years, prompted by a mere desire to test the actual requirements of material life; solving the problem by the simplest method, and intimately related to the world at large, through the preparation of a journal designed in a cosmopolitan spirit, although apparently only a personal record. Doubtless the inanities and insincerity of an average drawing-room or the pitiable proceedings of the moneychangers would have found little countenance in Thoreau, yet, all who knew him in Concord have testified to his earnest, though quiet, enthusiasm originating in inherently social instincts.

Regarding Thoreau's alleged pusillanimity, it may be safely affirmed that courage to cope with human vicissitude and true Yankee grit were salient features of a mind that dared assert, "Nothing is so much to be feared as fear." There was no lack of "nerve" in any portion of his experience, from the manufacture of a lead pencil to his last dignified and manly surrender to the will of fate. His writings, moreover, teem with the brave and simple trust that actuated him throughout his life; a hardihood of nature unshaken by time or circumstances.

Of his writings, it is perhaps too early even yet to say what may be their positive value to mankind. There are hearts and intellects to which a single apothegm or an isolated transcript of moral life would convey the sign of indubitable genius. "Of what significance," for instance, "is the light of day, if it be not the reflection of an inward dawn? To what purpose is the veil of night withdrawn, if the morning reveals nothing to the soul?"

For all that, to the majority of readers, Thoreau is destined to remain a riddle. The charge of being overrated, where literary merit is in question, is not infrequent and often as flippant as it is gratuitous. The fashion of the times, too, largely shapes the verdict passed upon art and genius, and within my own memory I have seen Goethe, Carlyle, Thackeray, Dickens and Emerson all mildly disparaged. The truth is, that only the consensus of many generations of criticism can make it possible to establish the rank of intellectual achievement and to evaluate its true merit.

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In a word, Thoreau's *raison d'être* in no sense is referrable to popular estimates of personal or public worth. The history of transcendentalism, to which his habitual thought was allied, is a steadfast and conclusive appeal from the cession of convictions to the tyranny of traditional opinion. Permeating with a sincerity, as of light, the dull vapors of conventional prejudice, its philosophy demands the most rigid adherence to ideal virtue and justice, refusing to degrade the individual, that mankind may be exalted. For its votaries, the placid vision of Browning's Rabbi Ben Ezra has an imperative significance as a revelation of purely passive virtue. It was precisely Thoreau's duty, no less than his delight, at times, to recline in solitude upon a favorite hillside and yield himself implicitly to the benign and uplifting emotions awakened by the loveliness and serenity of nature. Indeed, were every thinking man in the land compelled by statute to pass one golden day of the year in absolute withdrawal from ordinary associations, basking in careless indolence, and impressed, albeit unconciously, with the peaceful environment of natural beauty, can we doubt that by so much tranquil meditation the world would be benefited, political distinction appear less worthy of emulation when compared with solidity of character, and the melancholy scramble for riches involve fewer

derelictions from personal integrity than they do?

We must have office, and be clothed and fed, and find means of multiplying our talents. Very well. And after this? Is the feverish passion for success, which constitutes the ruling motive of so large a portion of mankind, the highest incentive to action or does it lead to the noblest results? The world of palpable issues has much to answer for which never could come home to lives like Thoreau's. Witness the records of our penitentiaries! The path to completeness and harmony of private character, blazed by noble thoughts and deeds no darkness of temptation can obscure, is, surely, more enviable than the brilliant dishonor ending in a felon's cell. If so, let us cordially admit that, whatever may have been his shortcomings, there, yet, was strength and wisdom to Thoreau's stainless, though humble, career, realizing the beauty and force of his own answer to philistinism. "Nature has a place for the wild clematis as well as for the cabbage."

Says Channing: "No man had a better unfinished life. His anticipations were vastly rich; more reading was to be done—of Shakespeare and the Bible—more choice apple trees were to be set. He tried "to pay every debt as if God himself wrote the bill." He attained to beyond middle age, his plans growing more and more complete and cherished. There were future books to be written; new details to be sought out concerning trees and plants; new acquaintances to be formed with birds and beasts. When he was forty-three, the future looked to him to be very full of possibilities."

But, in November of 1860, he contracted a severe cold while counting the rings of the trees, and with snow already on the ground. This developed as a bronchial affection, which he greatly made worse by lecturing at Waterbury. After this, he tried to be careful and even journeyed in search of health to Minnesota; however, his malady maintained its hold on him. His trust in God's love never failed him as he went down the inclined plane of that terrible disease, pulmonary tuberculosis. He worked steadily at the completing of his papers as long as he could hold the pencil in his trembling fingers; and as long as he could possibly sit up he insisted upon having his chair at the family-table, because it seemed so unsocial to take his meals alone. The last sentence that he spoke was incomplete and but two words of this could be understood—"moose" and "Indian." Then the world he had loved so well grew dim to his sight and on the sixth day of May, 1862, at not quite forty-five years of age, he closed his eyes forever.

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They laid his mortal ashes in the burying-ground at Concord, but the strong, free soul was gone—whither? Asked one time concerning his ideas as to the future life, he said that he thought he should not go away from Concord. Who knows the locality of the Father's many mansions, or whether the "poet-naturalist" of Concord may not still float on the sweet waters, smell the pine's fragrance and look into the shy eyes of birds and beasts, there in the haunts he loved so well? We do not see him, any more than we see the wind that fans our cheek; but, he and the wind were kin. He was part of the dawn and sunshine, and it is hardly conceivable that to the world he loved he can be alien now.

DON'T WORRY.

Don't worry, though above your head
The threatening storm clouds meet,
The rainbow as of yore shall spread
Its sign of promise sweet.
The flowers fled when winter gray
Proclaimed again his cruel sway,
Yet early blossoms smile and say,
"Don't worry."

Don't worry, though the noontide find
Your footsteps faltering,
The morn's glad hopes left far behind—
The day its joy shall bring.
When sunset's radiant curtains fall,
Sleep's angel, ready at the call
Of night, shall whisper low to all,
"Don't worry."

Don't worry, though with little good
Your eager quest seems fraught;
He that has striven as he could
Has striven as he ought.
Ask not how destiny was planned,
The little that we understand
Is eloquent with the command,
"Don't worry."

—*London Tit Bits.*

Among the Books

HORNSBY: "SMALL COMMUNITY HOSPITAL"

The Small Community Hospital. A Series of Eight Papers. By John Allan Hornsby, M. D. Reprinted from *The Modern Hospital*, St. Louis, Mo., 1917. Price $1.00.

A book is characteristic of its writer, and this little book is no exception.

Major Doctor Hornsby, the able editor of *The Modern Hospital*, is very direct in his dealing with those with whom he comes in contact—speech, glance of the eye, verbal expressions, and treatment of subjects under discussion. His book is written in the same direct, clear manner; he uses no profuse verbiage to convey an idea and no grandiloquent phrases to convey thoughts; he says what he means, in simple, forcible words and phrases; and, the result of reading this book is at once satisfactory and clear. Of many years of practical experience in hospital work, with fully matured ideas on the subject in hand, of broad and kindly judgment, he writes as he thinks and talks, and, the results are of the greatest benefit to his readers, whose number should be many.

The first paper is devoted to the creation of the community-hospital and gives reasons why a hospital should be established in every community, whether it be large or small, arguing that every community of two or three thousand people is, in the author's opinion, entitled to a hospital of some sort. The author then goes on explaining how to finance and plan a hospital, letting the contract, and equipping the building, from laundry and engine-room to the flag-pole on the roof. The subsequent papers proceed to tell of the organization of the hospital and of its staff, and then take up the subject of superintendent, internes, and nurses—at which latter point, by the way, the author pays a justly deserved tribute to the finer qualifications of womankind for hospital-work

If in any community public-spirited citizens think of starting a community hospital, they can here get a comprehensive idea of how to go about it, with all the details given in a clear, concise manner. In addition, there are given plans for a 25-bed institution to cost from $25,000 to $35,000, with description of construction, flooring and materials. Altogether, "The Small Community Hospital" constitutes a vitally interesting book.

There are to be had larger books on this subject and with treatment more extended, but in none is the subject treated so pithily, in such concise, direct phrasing as is found in this little book; which, when one finishes reading it, leaves a feeling that all salient points have been considered.

It is predicted that this work will be widely read, inasmuch as the hospital-field is large and by no means fully covered, there being need for numerous hospitals rightly managed, and even greater need for better management in already existing hospitals.

In closing, let it be said that, if anyone has any doubts about the direct, vigorous utterances and lack of "trimmings" in this book, their attention is called to the fact that the author has dispensed with a preface—an omission which is quite characteristic of the style in which the work is written.

S. C. BEACH.

STIMSON: FRACTURES AND DISLOCATIONS"

A Practical Treatise On Fractures and Dislocations. By Lewis A. Stimson, B. A., M. D. Eighth edition, revised and enlarged. With 475 illustrations and 39 plates in monotint. New York and Philadelphia: Lea & Febiger. 1917. Price $6.00.

A textbook that appears in its eighth edition hardly requires an introduction so much as an announcement. In the present edition, the author has made use of his observations, in the course of two visits to France, on modern war-surgery in so far as it concerns the subject of this textbook. He refers to the fact that in the

development of surgical measures American surgeons have exerted a very decided influence. Doctor Stimson's book is well printed and beautifully illustrated.

WOOD: "PHARMACOLOGY AND THERAPEUTICS"

Pharmacology and Therapeutics. For Students and Practitioners of Medicine. By Horatio C. Wood., Jr., M. D. Second edition. Philadelphia: The J. B. Lippincott Company. 1916. Price $4.50.

This textbook on pharmacology and therapeutics is especially acceptable because of the convenient arrangement of the subject-matter, as will be seen by the arrangement of the drugs discussed, namely: (1) Drugs used to affect secretion; (2) drugs used to affect the nervous system; (3) drugs used to affect the circulation; (4) drugs used to affect the alimentary tract; (5) drugs affecting metabolic processes; (6) drugs acting upon causes of diseases. In the discussion of drugs of vegetable origin, the author displays a pleasing predilection for the alkaloids and glucosides—a good sign for the increasingly greater recognition of these effective agents of positive therapeutics. The physical effects of the various drugs are described in a graphic and concise manner. Altogether, this work is an unusually meritorious one and one for which lasting popularity and continued revisions may be prophesied.

BOLDUAN-KOOPMAN: "IMMUNE-SERA"

Immune-Sera: A Concise Exposition of Our Present Knowledge of Infection and Immunity. By Charles F. Bolduan, M. D., and John Koopman, B. S. Fifth edition, thoroughly revised. New York: John Wiley & Sons, Inc., 1917. Price $1.50, net.

Bolduan's little treatise is one of the relatively few smaller books on infection and immunity that are of real value for the general practitioner, in that they explain the rather complicated problems, presented by these subjects, in as simple and concise a manner as is possible, without entering unduly into the tempting bypaths of speculation. Since the appearance of the first edition, just ten years ago, the text has been amplified in successive editions, according to the increasing knowledge on the topics treated; the present fifth edition, however, does not present any material changes from the fourth, beyond a detailed description of the technic for the Wasserman test.

In his explanation of the phenomena of immunity, the author leans to Ehrlich's side-chain theory, which, certainly, offers an explanation that is as ingenious as it is plausible. Yet, he defers justly to the opinions of other authors who entertain different views. Doctor Bolduan's little textbook serves well for rapid orientation and review of the problems of immunity, and always must be cordially recommended to physicians.

SPEED: "FRACTURES AND DISLOCATIONS"

A Textbook of Fractures and Dislocations: With Special Reference to Their Pathology, Diagnosis, and Treatment. By Kellogg Speed, S. B., M. D. Illustrated with 66 engravings. Philadelphia: Lea & Febiger. 1916. Price $6.00.

This volume is of special interest to us, as it emanates from Chicago, the author being associate in surgery in the Northwestern University Medical School and attending surgeon in a number of Chicago hospitals, including the Cook County Hospital. While there cannot be said to exist a dearth of books on fractures and dislocations, Doctor Speed's contributions, nevertheless, may properly lay claim to a prominent position among them, because of the splendid manner in which the task has been accomplished.

ROYSTER "INFANT FEEDING"

A Handbook of Infant Feeding. By Lawrence T. Royster, M. D. Illustrated. St. Louis: The C. V. Mosby Company. 1916. Price $1.25.

This volume is affectionately dedicated "to the overworked and underpaid general practitioner who must of necessity be, not only the family physician, but the all-round specialist," and thereby it lays claim immediately to an appreciative reception. And this is fully deserved, even if only for the fact that its purpose is, "to furnish the essentials, and only the essentials, of infant feeding in a compact and succinct form," that it does not proclaim any new method of feeding infants nor support any particular fad, but recognizes and emphasizes the nec-

essity for adjusting every food-formula to the peculiar requirements of the individual infant.

The chapter on the stools in infancy is contributed by Dr. John Lovett Morse, of Harvard University Medical School. The other chapters are well apportioned to the various problems arising in cases where artificial feeding becomes necessary. In short, we like the handy little volume and think that it should have a prominent place on the doctor's desk—not in the book-case, where it is liable to be overlooked.

MUSSER-KELLY: "PRACTICAL TREATMENT"

A Handbook of Practical Treatment. By Many Writers. Edited by John H. Musser Jr. and Thomas C. Kelly. Vol. IV. Philadelphia: The W. B. Saunders Company. 1917. Price $7.50.

The beautiful handbook on practical treatment edited by Drs. John H. Musser and A. O. J. Kelly, in three volumes, has just been brought to a successful conclusion by the addition of the fourth volume, which has the purpose of giving the various original contributors an opportunity to make in their articles such changes or modifications as were necessitated by the progress in the therapeusis of those diseases the treatment of which they had already detailed. Although we regret the death of the former editors of this excellent work, it is a matter of congratulation that the preparation of this present, concluding volume could have been entrusted to the sympathetic and efficient charge of Drs. John H. Musser Jr. and Thomas C. Kelly.

The volume comprises a textbook on modern treatment that is complete in itself. It contains chapters on general subjects, the one on drug-treatment being contributed in part by the late Sir Lauder Brunton, while the chapter on specific therapy was prepared by Drs. William H. Park and Charles Krumwiede Jr., of the New York Department of Health. Infectious diseases, parasitic diseases, diseases of the circulatory system, constitutional diseases, diseases of the respiratory system, of the digestive system, the urinary system, and the nervous system are covered very fully, the special chapters all being contributed by men who had devoted much time and attention to the study of the respective subjects.

A complete desk index to the four volumes of Musser and Kelly's "Practical Treatment" has been issued in a separate volume, making the consulting of this handbook very convenient.

ROSENAU: "PREVENTIVE MEDICINE AND HYGIENE"

Preventive Medicine and Hygiene: Containing a Special Section on Military Hygiene. By Milton J. Rosenau. Third Edition. New York: D. Appleton & Co. 1917. Price $6.50.

If long-continued practical experience, together with every facility and incentive for continued study, supported by years of successful teaching, are factors that may be supposed to fit anyone to be a good author and to produce a useful and serviceable textbook on his particular subject, a textbook that may be accepted as authoritative, then Rosenau's "Preventive Medicine and Hygiene" may safely be designated as one of the leading treatises on that subject. Indeed, the success of the first and second editions and the reputation of the author as a writer and a teacher, also as a sanitarian, bear witness to the correctness of our contention.

The present edition of this work may well be called a special military edition, having been prepared to meet the needs of existing war conditions. It contains a discussion of the duties and organization of the sanitary corps, the examination of recruits, diseases of soldiers, sanitation of troops in camp and on the march, sanitation of barracks and trenches, physical training, personal hygiene, equipment of the soldier, the Red Cross, rations, and other topics.

It is to be added, however, that the entire volume may be regarded as dealing with military hygiene; for, the fundamental questions concerning food, water, soil, ventilation, vital statistics, disposal of wastes, disinfection, and the prevention of the communicable diseases are essentially the same for the soldier and the civilian. And, finally, the "new" diseases and new medical conditions that have arisen in the present world-war, such as trench-fever, trench-foot, war nephritis, shell-shock, gas-poisoning, also, the increased severity and

frequency of tuberculosis, venereal diseases, et cetera are fully discussed.

Inasmuch as in the body politic, the same as in the human and animal bodies, no single member or organ can be diseased or distressed without the entire organism being affected, so under present conditions our participation in the war does not apply only to soldiers and their families, but, the entire nation needs must participate in its conduct as well as in its effects. It is necessary, therefore, that physicians in general as well as those in special practice should familiarize themselves fully with the important subjects of preventive medicine and hygiene, not alone as they relate to military matters, but, also, because of their bearing upon home conditions. For this reason, Doctor Rosenau's book is strongly recommended to the careful study of every medical practitioner throughout the country.

INDUSTRIAL MEDICINE

A special number devoted entirely to subjects related to industrial medicine is about to be published by *Medicine and Surgery* published by The Medicine and Surgery Publishing Company, Metropolitan Building, St. Louis, Missouri. While, at present, we have knowledge only of the announcement, we look forward to the number itself with much interest and shall refer to it in the next issue of this journal. Physicians are naturally interested in occupational hygiene, sanitation and pathology, and will wish to take advantage of this opportunity to secure valuable information. This special number is to cost 30 cents and will be mailed to any address on receipt of this sum.

GANT: "CONSTIPATION"

Constipation, Obstipation, and Intestinal Stasis (Autointoxication). By Samuel Goodwin Gant, M. D., LL. D. Second edition, enlarged. With 259 illustrations. Philadelphia: The W. B. Saunders Company. 1916. Price $6.00.

Constipation, obstipation, and intestinal stasis (intestinal autointoxication) are common ailments and may cause but slight annoyance or give rise to great mental and physical suffering; yet, in the author's opinion, they are easily cured, when correctly interpreted and treated. In this beautiful volume of some 550 pages of text, all types of constipation (atonic, spastic, fragmentary, psychic, and the rest), obstipation, and intestinal stasis, with their manifold symptoms and end-results, have been fully considered, and the method of their treatment (dietetic, physical, surgical, and so forth) has been described conservatively and in simple manner, other therapeutic measures being substituted for surgical procedures wherever feasible.

The author believes that drugs properly administered accomplish a very great deal toward the relief and cure of acute and spastic constipation, although, aside from a few exceptions, he considers them inefficient in the curative treatment of chronic atonic and mechanical constipation. He is of the opinion that chronic costiveness can be cured, in the vast majority of cases, without the aid of medicines, by means of education, exercise, psychotherapy, dieting, hydrotherapy, massage, mechanical vibration, and electricity.

In accordance with these views, the treatment of the many conditions that may be comprised under the general term of constipation is considered largely on non-medicinal lines, but, also with a view to avoiding surgical interference as far as at all possible. Still, several chapters are devoted to both methods of treatment, for the sake of completeness. These affections and their manifold sequels are of such enormous importance in dealing more particularly with "chronic patients" of the ambulatory class that careful study of this monographic work, and constant reference to it, must be strongly recommended.

"PROCEEDINGS OF ALIENISTS AND NEUROLOGISTS OF AMERICA"

The sixth annual meeting of The Alienists and Neurologists of America was held, under the auspices of the Chicago Medical Society, in Chicago, July 10-12. The subjects that were discussed during this meeting covered a great many of the problems that confront the physician in charge of patients suffering from mental diseases, and this volume of the transactions contains a mine of valuable information, while the price of the volume is given as $2.00. The entire edition, unfortunately, is exhausted, and the Reviewer gratefully acknowledges that only through the courtesy of the management he was enabled to secure a copy.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Queries

QUERY 6331.—Atropine in Dysmenorrhea," R. A. W., Louisiana. You are right, atropine has been recommended for the treatment of dysmenorrhea, but only in the spastic varieties; for, it is plain that no benefit can be expected when the difficulty depends upon organic changes in the generative organs. Probably the first one to use atropine in this manner was E. Novak, of Baltimore, who has reported some very satisfactory results with this remedy. However, it must be pushed to nearly full physiologic effect (toxic symptoms), according to this routine: Start about two days before the menstrual period, and continue until two or three days after the flow has ceased, and give doses of 0.00006 Gram (gr. 1-100) three times a day, if need be, oftener, or less often when toxic symptoms make their appearance. Failures are possible, though.

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QUERY 6332.—"Wanted: A Diagnosis." S., Ohio, has a male patient, aged twenty-six, bookkeeper, whose family history, so far as known, is good. "When a boy of ten, he went to a picture-show, and there his eyes began to burn and twitch. The eyelids twitched for several weeks, when the muscles of his mouth began thus to contract, then the muscles of neck, especially the back. Next the disorder showed up in the legs, the left one being worse. He used to "step high" at times for one or two steps, then walk normally again. The last to be attacked were the arms, the left worst. The pockets in his overcoat, where he places his hands to steady the arms, are torn down posteriorly, from the contractions —flexing the hand on the forearm. Now the arms are chiefly involved, but at times there are contractions of the muscles of face, neck or legs, but very seldom at more than one place at the same time—the muscles of the back of the neck pull the head back, which is very fatiguing. The hand flexed on the forearm makes the wrist and elbow very tired. Reflexes: Knees, left, gone; right, almost gone; feet, gone; elbows, almost gone; wrists, gone; eyes, light good; distance poor. The patient can stand erect, feet together, eyes shut or looking at the ceiling, eyes open or closed. He has at times rest for half an hour, never longer, when contractions will begin again. Many doctors have treated this man, but, all have failed to give even temporary relief. He says that he has taken Fowler's solution by the pint, without results. I do not believe it to be St. Vitus' dance, but, what is it? The motor side seems to be on an awful spree."

Unfortunately, doctor, it is impossible for us, with the information supplied, to venture a definite diagnosis. It hardly seems like a case of chorea, and, considering the length of time the disease has existed without atrophy of the muscle-groups, we are disinclined to regard it as multiple sclerosis; indeed, there would seem to be an athetosis; but, whether it is due to infection of the brain or the spinal cord (symptomatic athetosis) or an independent disease of unknown origin (idiopathic athetosis), we are unable to surmise. In the latter case, involvement frequently is bilateral, but, it may be unilateral. It usually is present from early childhood. The condition may be congenital and exist through life.

It should be borne in mind that idiopathic athetosis is very closely related to chorea. In certain cases, the characteristic symptoms may be so emphasized at one time that

the disease may be classified as chorea, and, at another, as athetosis.

So-called chorea electrica, in which individual convulsions are lightning-like, sometimes affecting one group of muscles and at other times a great portion of the musculature of the body, is probably identical with myoclonia.

In pronounced chorea, together with the characteristic muscular unrest, with the incoordinate movements, certain physical disturbances—that is, mental weakness and increased irritability of the mind—nearly always are present.

Salinger in his "Special Medical Diagnosis," says: "A detailed description of the symptoms, to facilitate the diagnosis of the affection, is of little value. The choreic must be *seen;* the picture of this affection impresses itself very easily, so that he who has closely observed the choreic movements in one case will subsequently not be embarrassed to recognize correctly even indications of chorea.

The main traits of the disease are briefly outlined as follows:

"Without prodromal phenomena or after a change of mental disposition and a relaxation of the mental faculties, rheumatic pains or disturbances of appetite and sleep have preceded, the pathognomonic disturbances of movement occur: Uncalled-for muscular contractions, which cannot be suppressed at all or only for a very short time and which interfere obstructingly with the intended movements, so that more delicate manipulations (writing, threading of a needle, etc.), walking and other coordinate movements become impossible. Especially characteristic are also the grimace-like contortions of the face and the disordered movements of the tongue, which impede the speech. The latter faculty is also changed in that phonation of the patients, owing to incoordinate movements of the laryngeal muscles, has become impaired, and that sudden inspirations interrupt them during the process of speaking.

"In contrast with the muscles with voluntary innervation, the activity of the musculatures of the heart, bladder, and rectum, and also that of the muscles of respiration and deglutition, is not impaired. It is only exceptionally that a more marked frequency of the pulse or arrhythmia of the action of the heart is noted.

"In spite of the restless contractures of the muscles, a sensation of fatigue does not occur; the muscular unrest disappears entirely during natural sleep or in sleep which is produced artificially; on the other hand, in waking, it is increased by every psychical emotion.

"The mind probably is more or less disturbed in every instance—from my own experience I know of no exception. The depression of mental faculties, an impairment of memory as well as of the entire process of thinking, always predominates. Besides, an increased irritability of the mental sphere may eventually manifest itself; pronounced psychoses also occur occasionally in chorea.

"Disturbances of sensibility are absent; only the nerve trunks and, above all, some vertebræ are often sensitive to external pressure. Conditions of electric reaction are mostly normal; sometimes, as I am able to confirm from my own experience, an excessive irritability to the induced current can be determined. Such deviations from the normal condition cannot be utilized in the diagnosis. The action of the reflexes is unchanged, the tendon reflexes are normal, weaker or, as in one of my cases, intensely increased. Some authors have found the pupils permanently dilated. Personally, I cannot confirm the constant occurrence of mydriasis in chorea.

"The temperature of the body is normal, also the amount of urea in the urine, whereas the excretion of chlorides in the urine is decreased, and albuminuria is occasionally noted at the height of the disease."

If you have access to Salinger's and Luebe's "Special Medical Diagnosis," or their "Diseases of the Nervous System," we suggest that you read up thoroughly on chorea, myoclonia, paralysis agitans, and multiple sclerosis; then carefully study your patient. Should you still find difficulty in arriving at a definite diagnosis and feel disposed to give us a clear clinical picture, we shall be more than pleased to aid you to the extent of our ability

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QUERY 6333.—"Removal of Cuticle in Dertosis." K., Chihuahua, Mexico, has to contend with a peculiar skin disease very prevalent in that section of the country, and, after having experimented considerably, finds that removal of the cuticle of the affected area results in an absolute cure; at least in none of the cases so treated has there been a relapse. He finds, though, that

the removal of the superficial layers of the epidermis by means of certain substances is accompanied by a good deal of pain and, inasmuch as the operation has to be carried on over the entire affected area and at times involves the entire face, the pain is severe. He desires to know how this undesirable feature may be overcome.

It is an easy matter to produce simple exfoliation of the skin with the aid of some one of the socalled "peeling pastes." The application two or times daily of a 25- to 50-percent alcoholic solution of resorcin also promptly and satisfactorily brings about this exfoliation.

The paste most commonly employed for this purpose consists of beta-naphthol, ½ to 2 drams; precipitated sulphur, 4 drams; green soap (sapo viridis), 2 drams; rose-water ointment (or any bland fatty base), 2 drams. This is smeared on the face or applied spread upon lint and kept in place for fifteen to thirty minutes. After its removal with a piece of linen or absorbent cotton saturated with oil or cold-cream, the parts finally are washed with warm water and a bland soap. A little vaseline may then be rubbed in with the finger-tip. Such application may be made every night. Within a few days, sufficient irritation will be excited to cause desquamation. Of course, the same end can be obtained in a shorter time by making the application two or three times daily.

When the area affected is limited and for any reason the application of peeling pastes or agents producing desquamation is undesirable, one may secure superficial freezing of the surface by means of the ethyl-chloride spray, removing the cuticle as soon as it becomes whitened, that is, frozen.

Perhaps, if you were to describe minutely the character of the dermatosis, accompanying your description with a good photograph of some affected individual, we might be able to offer further suggestions.

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QUERY 6334.—"Amebic Colitis?" C. A. B., Arkansas, reports on an "epidemic of bowel trouble among the babies (mostly), although quite a number of grownups have been attacked. The affection is similar to amebic dysentery and very fatal. Some call it colitis." Advice as to treatment is requested.

Amebic colitis is not a common disorder in this part of the world, although the condition perhaps is present more often than is supposed.

In every case, the amœba coli will be found in the stools and the colonic ulcers present. In doubtful cases, the feces should be examined by a competent pathologist, otherwise a diagnosis is made with difficulty and the patient is likely to be treated for anything but the right disorder.

In amebic colitis, a rise of temperature and diarrhea come on suddenly and disappear in a few days; this recurring at irregular intervals. The pain during the acute stage is marked and tenesmus is severe.

Emetine hydrochloride may be regarded almost as a specific. This drug should be given hypodermically. At the same time, high enemata of physiologic salt solution followed by a 1 : 1000 quinine solution should be administered. The combined sulphocarbolates should be pushed, also quinine ferrocyanide, 1-16 to 1-32 grain, is to be given several times daily. A highly nutritious diet is essential.

It is more probable, however, that in this case you have to do with acute enterocolitis, in which condition, there is more or less pain and swelling of the abdomen, the patient vomits, and has several stools daily, preceded by marked griping The dejecta at first are greenish- or yellowish-brown and carry streaks of mucus and blood or are followed by these. The seat of infection invariably is the colon, but, usually the ileum, above the ileocecal valve, for a distance of one foot or more, also is involved. Occasionally the enlarged follicles of the colon ulcerate, when pus appears in the stools. We then have to deal with a serious condition.

As you can readily understand, without a clear clinical picture and some idea of the nature of the invading microorganism, we are unable to extend any very definite assistance; but, if you will send some of the feces and give us sufficient clear clinical data, it will give us pleasure to serve you to the extent of our ability.

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QUERY 6335.—"Postpartum Hemorrhage and Early Nursing. Time to Tie Cord." E. W. S., Oklahoma, writes: "I find in July CLINICAL MEDICINE, on page 517, this statement: 'I have had one postpartum hemorrhage in these cases; this, though,

was caused by the mother putting the child to the breast within an hour and a half after delivery.' I have delivered many hundreds of babies, and in nearly every case put the baby to the breast as quickly as possible, rarely over one hour after delivery. I thought that they should be 'taught to suck' as soon as possible. Most of the doctors with whom I am acquainted think the same. How long after delivery should one wait before cutting the cord?"

Unquestionably, you can find numbers of practicians to argue for and against this subject, but, in our opinion, the crux of the whole matter rests upon this point. It is, as a rule, impossible to tell one hour after delivery just what the uterine conditions are or will be an hour later, and it is quite possible that the act of nursing might, in this extremely early stage, produce unfortunate results. Where no lacerations exist, the placenta is entirely removed, and in every other way normal conditions obtain, nursing might, and probably would, cause further uterine contraction. On the other hand, let us imagine that the contractions are uneven, or that a laceration of the lower uterine segment obtains, too early nursing under such circumstances might set up hemorrhage.

We are inclined, therefore, to believe with DeLee and other well-informed obstetricians, that it is undesirable to place the child to the breast until the mother has rested for several hours.

Perhaps we can best answer your question, "How long after delivery should one wait before cutting the cord?" by quoting a few paragraphs from Jellett's "Manual of midwifery." He says:

"The old dispute as to when the cord should be tied possesses now little more than an academic interest, as it is conclusively settled that this should not be done until all pulsations in the cord have ceased. Formerly, it was customary to tie the cord the moment the fetus was born or as soon as it had cried lustily, and, in spite of the representations of White, of Manchester, this practice continued up to comparatively recent times. White, who was perhaps the most scientific obstetrician of his day, clearly recognized the absurdity of supposing that it was possible for the change from the placental to the pulmonary circulation, with all that this implies, to take place in a moment. 'Is it possible,' he writes 'that this wonderful alteration in the human machine should be properly brought about in one instant of time, and at the will of a bystander? . . . By this rash and inconsiderate method of tying the navel-string before the circulation in it is stopped, I doubt not but many children have been lost.' The experiments of Budin and Ribemont-Dessaignes have set the question at rest. Budin has proved that an infant in whom the pulsations of the cord are allowed to cease before ligation gains on an average 92 grains (3 ozs.) of blood, which otherwise it would have lost.

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QUERY 6336.—"Dosage of Calcium Iodide." C., West Virginia, writes: "I have been using calcium iodide (calx iodata) for some time, with splendid satisfaction; but, I am 'at sea' as to just how much I can give without producing toxic effects. Please, give me some definite information as to the maximum dose, how often to be repeated, and how long continued, both for adults and children."

Calcium iodide is, virtually, nontoxic, the dosage, though, must of necessity depend upon (1) the impression you desire to make, and (2) the conditions present in the individual under treatment.

However, quite large doses of calcium iodide may be given over a prolonged period without producing symptoms of iodism, although occasionally some individual proves particularly susceptible to iodine in any form, and it is necessary then to proceed somewhat carefully.

Where pronounced and immediate impression is desired, an adult may receive from 2 to 5 grains three or four times daily; children, from 1-3 to 1 grain at short intervals, to effect (i. e., to relief of symptoms or beginning signs of iodine sufficiency), then 1-3 to 1 grain thrice daily, to maintain effect.

It would be difficult to fix a toxic dose; children suffering from croup have received as high as 10 and 20 grains within three hours, while a patient suffering from cerebral syphilis, in the writer's practice, received 30 grains a day for three weeks. Such doses are, of course, unusual and, as a rule, uncalled for.

In the more common catarrhal disorders, 1-3 to 1 grain is given (preferably in hot water) every hour for three or four doses.